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JULY 29, 1950

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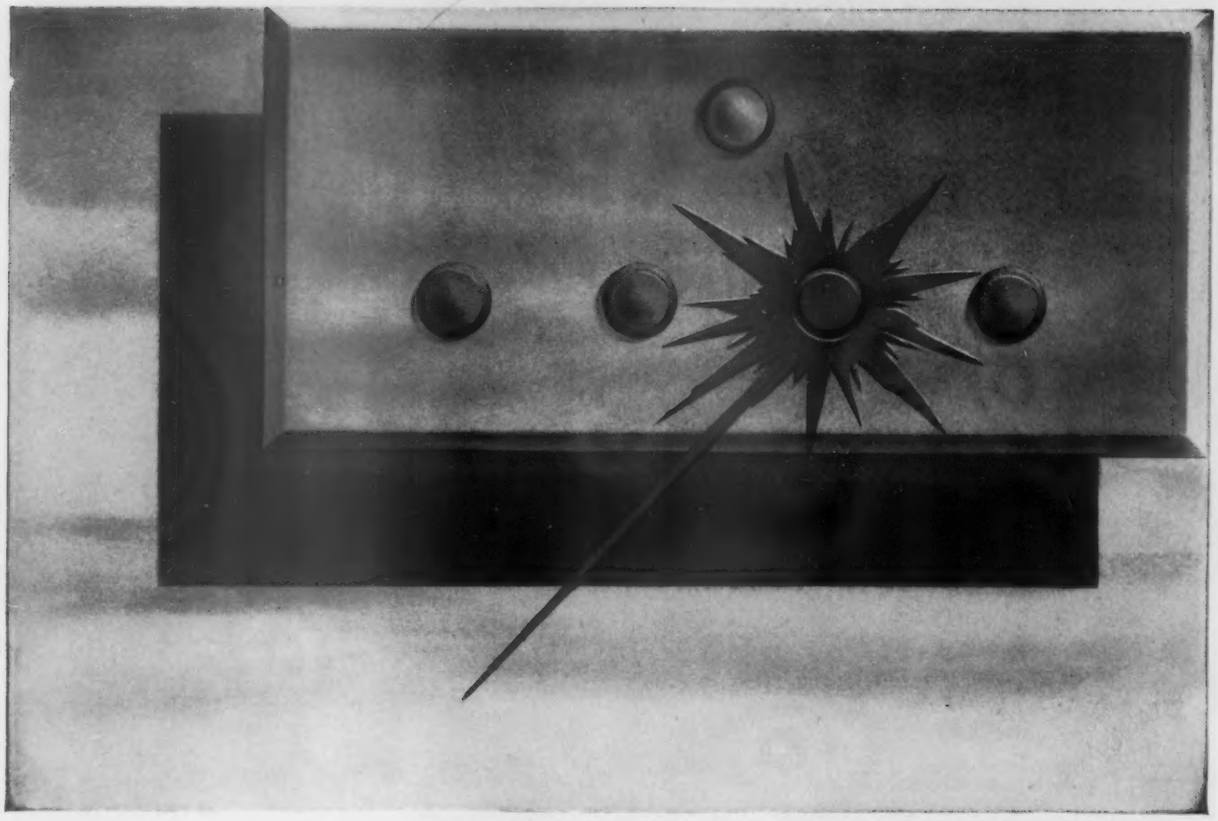

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WEEK AT A GLANCE

ACCOUNTING DIVISION MEETS AT OTTAWA: Early next week, at Ottawa, Ont., the Accounting Division of the Association of American Railroads holds its annual convention. In recognition of that event, and in appreciation of the steadily increasing importance of railroad accounting and of the rapid improvement of tools for its conduct, no less than three of this week's feature articles are concerned with accounting subjects. Beginning on page 16, R. J. Herring, comptroller of the Denver & Rio Grande Western, tells how "mark sensing" permits quicker and easier completion of inventory taking on his road, plus better statements for its management. On page 18, T. H. Cooper, vice-president and comptroller of the Canadian National, describes his company's new payroll procedure—which, incidentally, also involves mark sensing. And on page 21, W. L. Price, vice-president, accounting and freight claims, of the Baltimore & Ohio, tells how the office methods and procedures department which his company established in 1945 has produced to date annual payroll savings of some $500,000, with the added benefit of better service for B.&O. patrons—in, for example, faster handling of freight claims and better freight billing procedures. An account of convention proceedings is scheduled for publication in the issue of August 12.

NEW DESIGN FEATURES IN DIESEL SHOP: To augment its existing Diesel locomotive repair and servicing facilities, the Union Railroad has recently constructed at Hall, Pa., a large inspection and truck-repair shop which combines the latest practices in design of such buildings with further advances planned to increase its effectiveness and efficiency. The new shop is fully described and illustrated, and its layout diagrammed, in the feature article which starts on page 25.

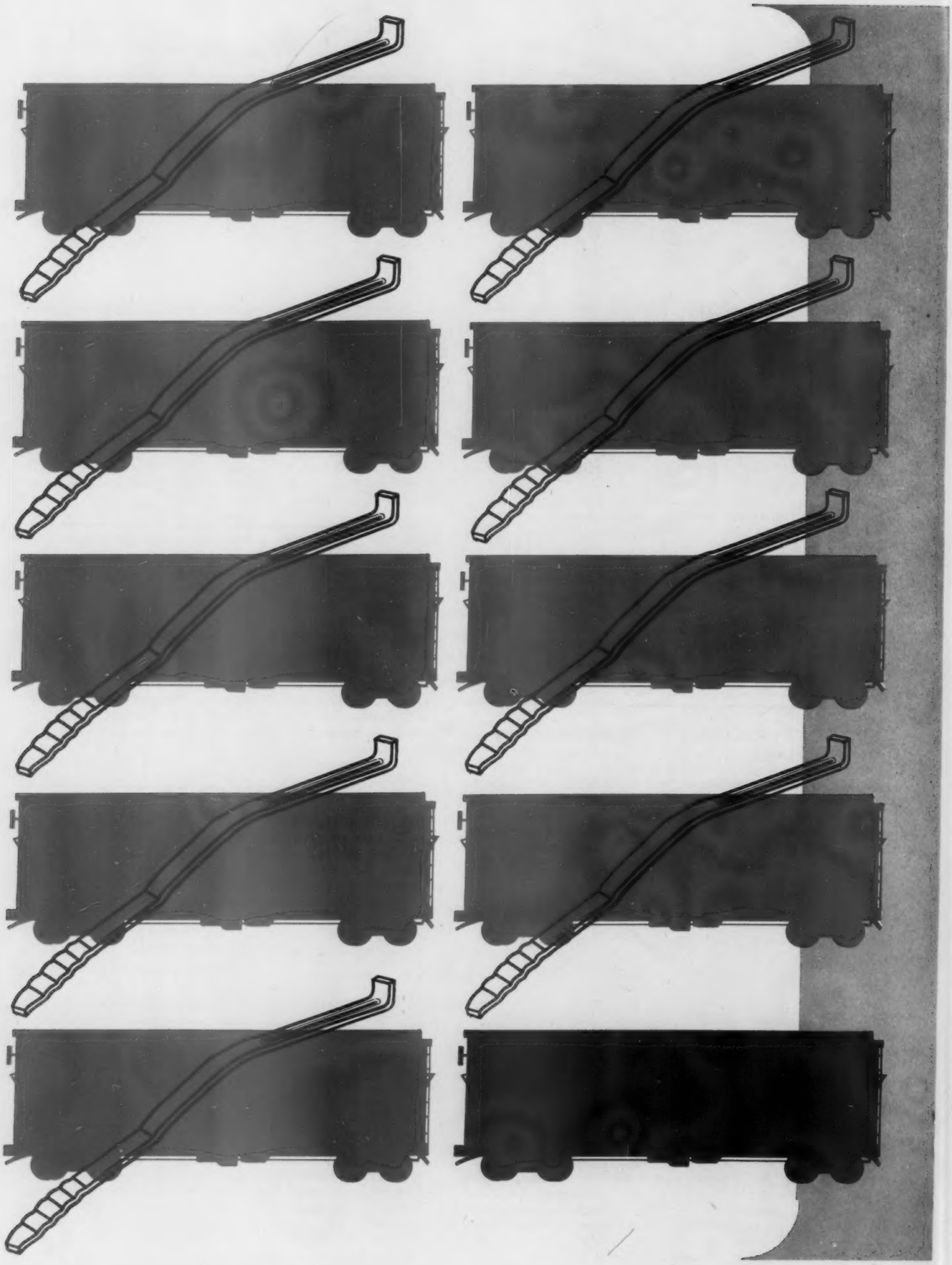
READY AGAIN FOR EMERGENCY SERVICE: As the situation in Korea grows more serious, and as the country turns increasing attention toward at least partial mobilization of its potential military strength, the ability of the railroads to handle another large volume of emergency traffic again becomes a question of primary national importance. In a special statement issued this week at Washington, A.A.R. President William T. Faricy expressed his firm conviction that the "railroads are in better shape now to handle defense emergency traffic than they were before World War II." And Secretary of Commerce Charles Sawyer assured committees of both Senate and House that "our transportation system has a far greater capacity than prior to World War II." Such reassuring statements, however, don't necessarily mean that the country can expect "transportation as usual" if the world situation becomes still more serious. Mr. Faricy, for example, was careful to point out that "government assistance and shipper cooperation" may again be needed to apply "the measures which stepped up the whole tempo of rail transportation" during World War II. And, as our News review of his statement makes clear, he was equally careful to point out that "in any program of allocation of materials, it is essential that railroads receive greater and more prompt recognition than they did prior to 1943, and that they be allowed access to the manpower and materials necessary both for their operations and for repair and maintenance." Such "recognition" and such "access" assume special importance in view of the volume of freight-car orders and inquiries reported in this week's Equipment and Supplies column, and of the further orders which may result from the A.A.R. member road meeting scheduled for July 28. Meantime, there seems to be marked difference of opinion as to the bad-order situation. I.C.C. Chairman Johnson calls it "scandalous"; C.S.D. Chairman Gass notes an improvement. Both statements are quoted in the News.

TIME TO CONSERVE: Another aspect of the present emergency's effect on transportation is discussed in the week's editorial comment (page 11), which points out that "dissipation of resources in so vital a military adjunct as transportation is a plain invitation to disaster." From this basic premise, it continues to show that "lack of any ordered transportation policy" has produced just such "dissipation of transportation resources" as can no longer be condoned. It explains certain fundamental steps which are essential to conservation of those resources. And it points out, finally, that "any deficiency in equipment to meet all demands upon them which the railroads may suffer will arise directly, if it does arise, . . . from the lack of a national transportation policy."

OIL OR GREASE? "Today there is real interest in the application of greases to railroad car-journal roller bearings, in line with the trend in all bearing lubrication toward replacing oils with grease." So says E. M. Higgins, engineering vice-president of the Master Lubricants Company, in an illustrated article, which begins on page 30, on grease lubrication of roller bearings. Mr. Higgins discusses in considerable detail the characteristics required in greases suitable for use in journal-boxes.

NEW PRESIDENT FOR PULLMAN-STANDARD: On page 39 are biographies and photographs of Charles W. Bryan, Jr., and Champ Carry, new and retiring presidents, respectively, of the Pullman-Standard Car Manufacturing Company. Mr. Carry continues active in company affairs as chairman of the board of directors and president of Pullman, Inc.

IN THE NEWS SPOTLIGHT: Prudential Insurance Company to enter freight-car financing field in conjunction with General American-Evans.—Car loadings increase.—National Security Resources Board has plan for war transport set-up.—Senate subcommittee hears testimony concerning changes needed in Railway Labor Act.—New Haven to drop l.c.l. service at selected points.—Loeffler heads A.R.E.A. —I.C.C. hears oral argument for reopening D.T.&I. case.



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TIME TO BEGIN CONSERVING OUR TRANSPORTATION RESOURCES

To defend our country and ourselves against the military peril which now confronts us, and which may threaten us for a long time, we should begin at once to conserve our basic transportation resources. Wastefulness and improvidence in time of world peace and great plenty may be condoned, if not excused. In time of imminent peril, the dissipation of resources in so vital a military adjunct as transportation — as has been going on ever since World War II ended — is a plain invitation to disaster.

Experience in the recent war as well as in World War I demonstrated that for heavy, long-distance movement of men and materials, no other agency of transportation can take the place of the railroads. A crew of five men on a railroad train can move as much as 3,000 or more tons of freight — which it would take 200 or more men to move by truck, allowing as much as 15 tons and only one man per truck. There is similar, although perhaps not such remarkable, economy in the use of railroads for long-distance movement of troops.

We should conserve fuel too — particularly petroleum—and a hundred gallons of refined petroleum will move seven times as much freight when used by a Diesel-electric locomotive on the railroads, as when a similar quantity of fuel is used in freight movement by truck. Moreover, almost half of the freight movement by rail is still powered by coal-burning steam locomotives, and in a "hot" war coal will be much more plentiful than oil.

We must assume from experience that all our transportation resources—railroads, highways, trucks, buses, planes, ships and barges, and the men to operate and maintain them — may be urgently needed before the present emergency is ended. Conserving our transportation resources means using each transportation instrument for the tasks at which its economy surpasses that of all alternative means. We should not use great big locomotives and trains to do the short-haul, retail transportation jobs for which trucks are ideally adapted. Trucks and buses should be concentrated on the transportation work which they can do with less expenditure of manpower, fuel and materials than would be required to do these jobs by rail. Similarly, we should quit wasting fuel, manpower and materials to haul large quantities of freight long distances by truck — when the consumption of fuel, manpower and materials would be vastly reduced if this long-haul freight were moved by rail.

Realizing the vital importance of their service to the national defense, as well as to the peacetime economy, the railroads of the United States since the end of World War II (that is, in the period 1946-1949 alone) have spent more than four billion dollars to increase and improve their plant and their rolling stock. In the national

interest they should have spent a lot more than this, and they would have done so if they had had the money, but the chaos in transportation — as the result of our nation's lack of any ordered transportation policy — depleted their earnings and limited their credit. As it is, their expenditures for improvements so far exceeded their income that from the end of 1945 to the end of 1949 net "working capital" of the Class I railroads shrank one billion dollars, from $1.6 billion to about $650 million. From the end of 1946 to the end of 1949, outstanding railroad equipment obligations almost tripled, rising from $220 million to $605 million.

Steps Toward Conservation

The evidence of the magnitude of railroad expenditures, combined with that of the decline in their net working capital, shows that the industry has strained every muscle of its financial fiber to be ready to meet the present emergency. Whether the railroads will be able to do all they will be called upon to do, they cannot tell. Their record shows that they will perform as efficiently as human ability permits, within the limits of the facilities their limited financial resources have permitted them to assemble. What they have the right and duty to demand—as trustees in the national interest of the most militarily vital part of the country's transportation resources — is the support of the intelligent and patriotic part of officialdom and the electorate for a political and regulatory framework which will remove the more gross and obvious causes of waste of transportation resources — such steps as these:

1. Regulatory policy to permit the railroads to withdraw trains and services promptly, turning the traffic over to highway transportation, wherever these trains and services are so poorly patronized as not to earn expenses — thereby indicating that the railroads could make better use of the cars, locomotives, and manpower somewhere else.

2. Regulatory policy to provide flexibility in railroad rate-making and to encourage the railroads, rather than other forms of transportation, to attract the traffic which can be moved most economically by rail — that is, equalizing regulatory conditions in transportation, especially as between common carriers on the one hand and contract and private carriers on the other; and permitting the railroads to make — without attack because of alleged "discrimination" — any compensatory rates necessary to hold or attract traffic where overall economy of resources manifestly favors rail movement. Traffic ordinarily is guided by rates in choosing its transportation. Government policies which permit the high-cost agency to make lower rates than the low-cost agency are contrary to the national interest and should be revised forthwith.

3. Seeing to it that the railroads, and the manufacturing industry which supplies them, get access to all the scarce materials needed to enable the railroads to provide the long-haul, mass-quantity transportation required for the national safety. (It would be wasteful to allocate manpower and materials to the continuance of "retail" and short-haul transportation by the railroads as it would be, at a time like this, to press forward the construction of highways or highway vehicles which are designed primarily for long-haul traffic.)

The railroads have for several years repeatedly pointed out the need, in the public interest, for a national transportation policy which would have the effect of conserving national resources and increasing national income by promoting the division of the nation's transportation work among the several agencies on a basis of their relative fitness for the jobs to be done. It is wasteful to use a train and a crew of five men to move a few tons of freight or a few passengers a few miles. It is just as wasteful to divert a trainload of long-haul freight to the public highway and use a couple of hundred men to do the work that five men could do if the freight moved by rail. National policy to reduce or eliminate such waste is desirable in time of peace and plenty — in time of war the difference between victory and defeat may well be determined by the degree of wisdom with which a nation uses its available resources.

Wastefulness in transportation prevails all over the country now, primarily because of regulation of the railroads dating back to horse-and-buggy days, before we had our modern system of highways and 46 million motor vehicles. This regulation delays or prevents the railroads from withdrawing from retail transportation jobs that trucks could do more economically. It prevents them from meeting competition in rates by trucks for long-haul, mass transportation jobs to which the railroads are better suited than other agencies.

No Partisan Objective

Insistence that national transportation policy be modernized in the light of present-day realities is no partisan objective. Practically all competent and impartial authorities agree — among them the Brookings Institution, which in a recent report on national transportation policy declared that "government policy in this field is characterized by defects in the programming and expenditure of public funds, unattainable regulatory objectives, and indeterminate division of authority and responsibility between government and private management."

One of the reasons why trucks are encouraged to invade the field of long-haul mass transportation, where they are less economical than the railroads, is that charges for the use of the highways by very heavy trucks are shockingly less than the cost of highway service (i.e., less than the proportionate share of capital and maintenance costs incurred in behalf of heavy vehicles). For example, in New York state the consulting engineering firm of Griffenhagen & Associates reports that the fees now levied for the use of the highways by the heaviest trucks would have to be quadrupled to equal the charge per ton-mile levied on private automobiles. In state after state similar impartial studies have disclosed gross undercharging of the biggest trucks for the use of the public highways. Such undercharging enables the operators to compete for traf-

fic which — from the public interest standpoint — it is uneconomic for them to handle.

Any rational national policy toward transportation must insist that charges for the use of public property as a place of business be raised to a compensatory level. Otherwise, the transportation agencies using public property as a place of business will charge rates which do not reflect the actual costs of their service — and traffic will be diverted to agencies which use up more manpower, fuel and materials than are actually needed to perform the service. When a transport agency has to pay *all* the costs of the service, then its rates reflect these costs, and the agency which uses the least manpower, materials and fuel is automatically the one that gets the business. This is not the condition obtaining in transportation today.

Highway Sabotage

Another irrationality in our present lack of a consistent policy toward transportation is the prevalence of use of our highways by vehicles much heavier than the highways were built to carry. The acknowledged experts on this question are the American Association of State Highway Officials. These officials insist that 18,000 lb. per axle is the maximum weight that our highways can safely carry. In defiance of this advice, many of our states either do not limit the weight on axles at all or permit weights in excess of those urged as maxima by the highway experts.

As dangerously overgenerous as weight limitations are in many of our states, even these limits are recklessly violated by many operators of heavy vehicles. In Illinois in the 14 months ended April, 1950, there were 40,000 arrests for overloading; in Indiana 4,554 in the year 1949; in Maryland in a recent 12-month period there were 3,792 convictions for overloading of trucks. Nobody supposes that enforcement officers catch more than a small percentage of the violators, and the penalties in most states are so small that the extra profit from overloading more than compensates for any possible fine the violator may risk. In Maryland, for instance, enforcement authorities obtained about as many convictions in the twelfth month of active enforcement as they did in the first month of the campaign.

Loads which exceed safe limits entail repair and reconstruction costs which are paid by the taxpaying public and law-abiding highway users. They are a subsidy by the law-abiding to the lawless, enabling the latter to charge less than the actual cost of service and thus attract traffic which it is economically wasteful for them to handle. A logical national policy toward transportation requires limitation on the loading of trucks to conform to the strength of the highways, and rigorous enforcement of these limits — not only to prevent traffic which does not belong on the highways from being uneconomically diverted to them, but also to prevent the physical destruction of the highways.

No one knows what trials may lie ahead for our country and our people. It is conceivable that construction of new transportation plant — highways as well as railways — might have to be stopped altogether, because of more urgent needs for manpower and materials elsewhere.

If that should happen, we would still need our present highways and railways — hence we cannot permit these facilities to be destroyed by abuse. In present circumstances of national peril any railroad officer who would knowingly send out on the line a locomotive heavier than the track and bridges could stand up under would be a plain saboteur — a friend of his country's enemies. Is there any difference when a truck operator or public official operates, or permits the operation of, trucks of sufficient weight to break down our highways?

As Thomas H. MacDonald, U. S. Commissioner of Public Roads, has said: "We are overloading our highways in their traffic volume capacity and their structural capacity. . . . Axle loads in excess of 18,000 lb. should not be authorized. . . . During the early Thirties a gradual increase in damage to pavements was observed. Prior to the war, damage had reached alarming proportions. With the marked increase in heavy loads since the end of the war, the damage has become even more alarming. . . . There is conclusive evidence that this damage is caused by heavy wheel loads."

Results of Chaos

The chaos in transportation which has existed since the end of World War II has been disastrous to railroad earnings and credit. In the years 1946-49 the railroads have earned an average of only 3.65 per cent on their net assets, as compared to 9.08 per cent by the utilities and 15.45 per cent by the manufacturing industry. Any deficiency in equipment to meet all demands upon them which the railroads may suffer will arise directly, if it does arise, from their poor earnings and poor credit — which, in turn, come from the lack of a national transportation policy giving the railroads an opportunity to serve the traffic to which they are economically entitled; providing realistic flexibility in railroad rates; and freeing the railroads from the obligation to serve traffic which ought to move by highway. Since the railroads are privately owned and privately financed, the only way for them to raise the necessary funds to acquire adequate facilities must be for them to enjoy earnings and credit standing comparable to that of other industries. A national transportation policy based on considerations of sound economics would quickly give them such earnings and such credit.

America must be mobile to confront its present military danger — with the means to shift large bodies of men and munitions anywhere on the continent on short notice. Only strong and well-equipped railways can do the bulk of this job adequately and without waste of manpower, fuel and materials. The steps necessary to make the railways strong also happen to coincide with those necessary to prevent the disintegration of our vital system of public highways, which we do not have the available manpower and materials to replace, even if we could afford the expense.

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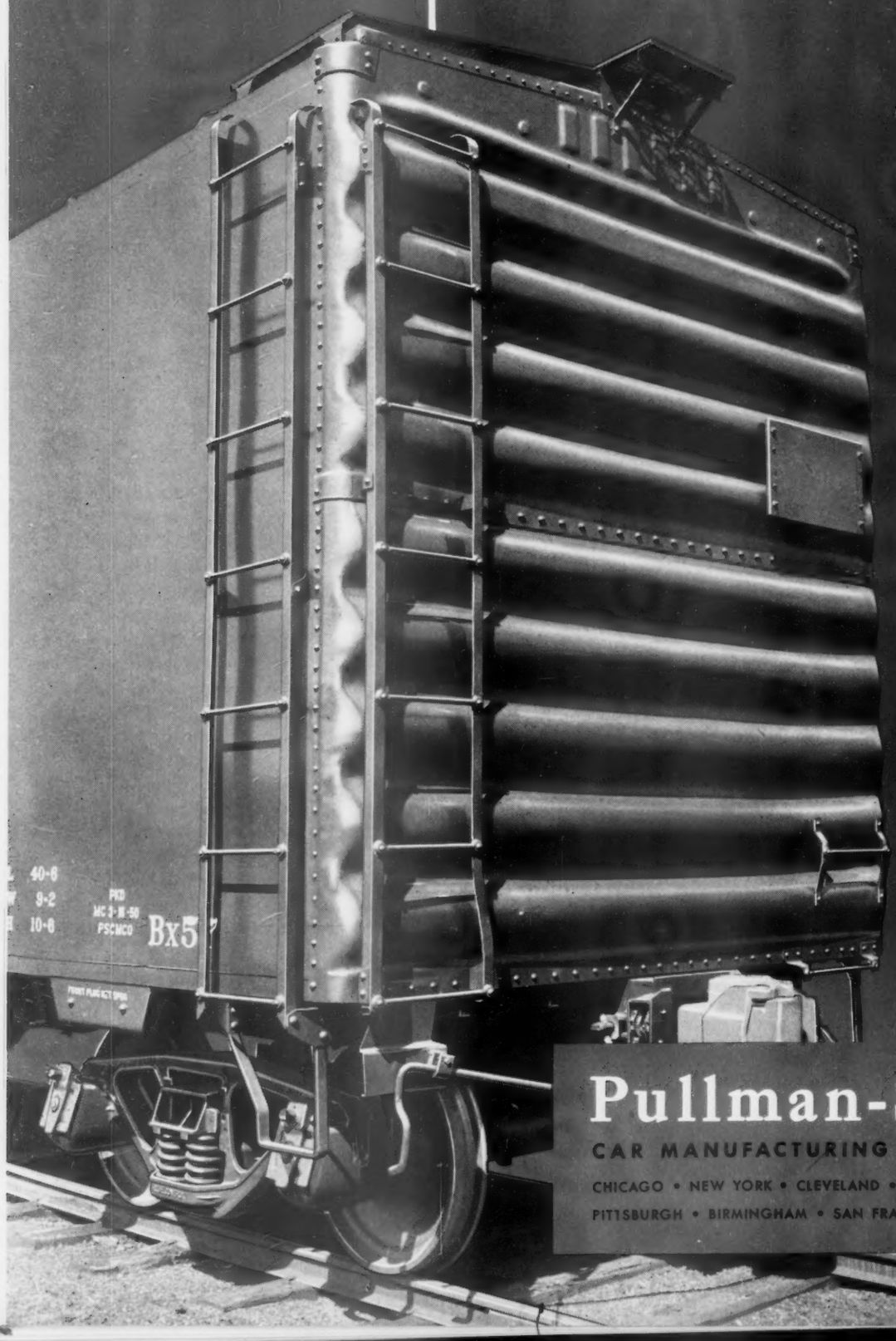

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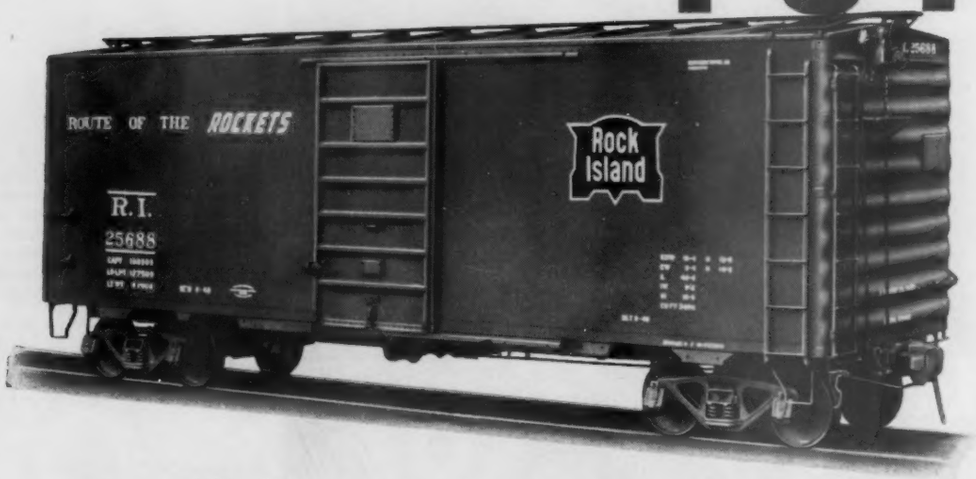

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More than 20,000 PS-1's, delivered since the introduction of this car only three years ago, are *road-proving* the value of this policy to the railroads of America.

Mark Sensing Aids in Taking Inventory

By R. J. HERRING
Comptroller, Denver & Rio Grande Western

Quicker and easier completion of inventory taking, plus better statements for our management have been the result of the Denver & Rio Grande Western's adoption of the mark sensing technique for handling this type of work. Under this plan much of the hand work and typing involved in the old method of taking inventory are eliminated.

Each division store is assigned a four-digit identification code; such as, 1000, 2000, 3000, etc., and each substore under the division store is assigned a three-digit code within the above four digit assignment for the division store, such as, 1100, 1200, 1300, etc. Also, each separate location in the store, such as the casting platform, the brass foundry, the separate floors of bins, etc., is assigned a two digit code as the last two digits of the regular store code.

Blank cards (see Fig. 1) are prepunched for consecutive numbering and location code, and interpreted on International Business Machines equipment before mailing to the stores. Cards which are placed in bins and other locations are complete, as far as possible, as to description of material, unit, unit price, and Association of American Railroads class prior to the day the actual physical count is to be made. Each storekeeper has rubber stamps to stamp the description of the item on cards for such items as bolts, screws and other recurring materials to save as much writing as possible.

When the official count has been made and this information is placed on cards, they are turned in to the storekeeper's office where material clerks check prices as reported, and then mark sense number of units and unit price. Cards then are hand sorted to A.A.R. class as they are mark sensed. Then, properly wrapped and identified, the inventory tags are forwarded to the auditor of disbursements.

H. E. Haynes, clerk at Burnham store, marks inventory tags as J. A. Witherwax, section store keeper (right), counts hose clamps. Elmer Larson, division storekeeper at Burnham, looks on

J. L. Pearce, assistant to comptroller (left), and T. J. Cooke, auditor of accounts, machine bureau, look on as A. M. Rivero, operator, places inventory tags in calculating punch for extension, i.e., unit price is multiplied by quantity on hand to determine value of material on hand

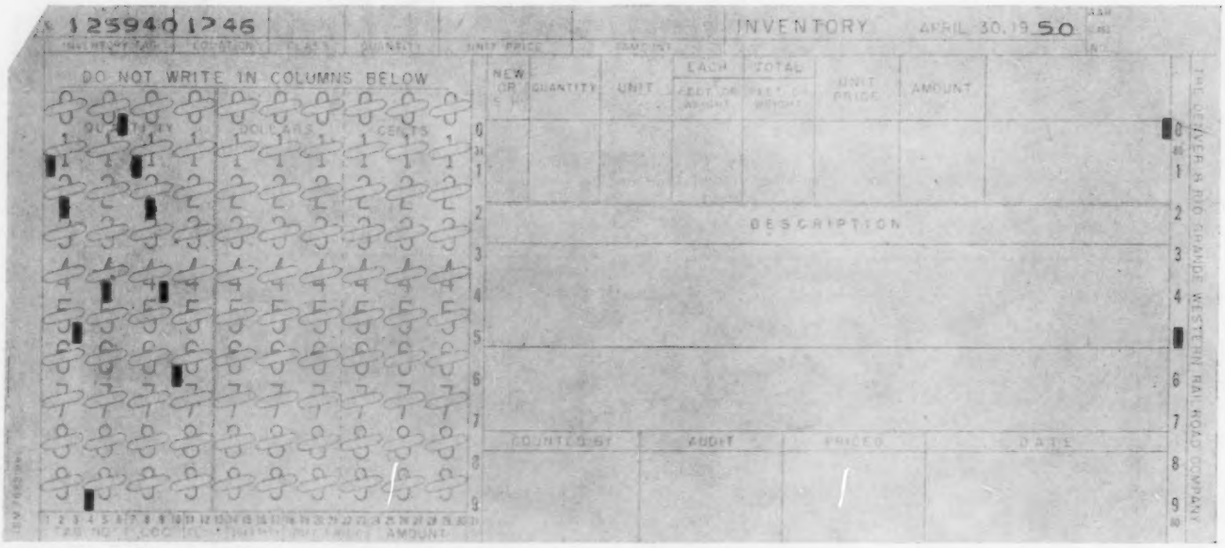


Fig. 1

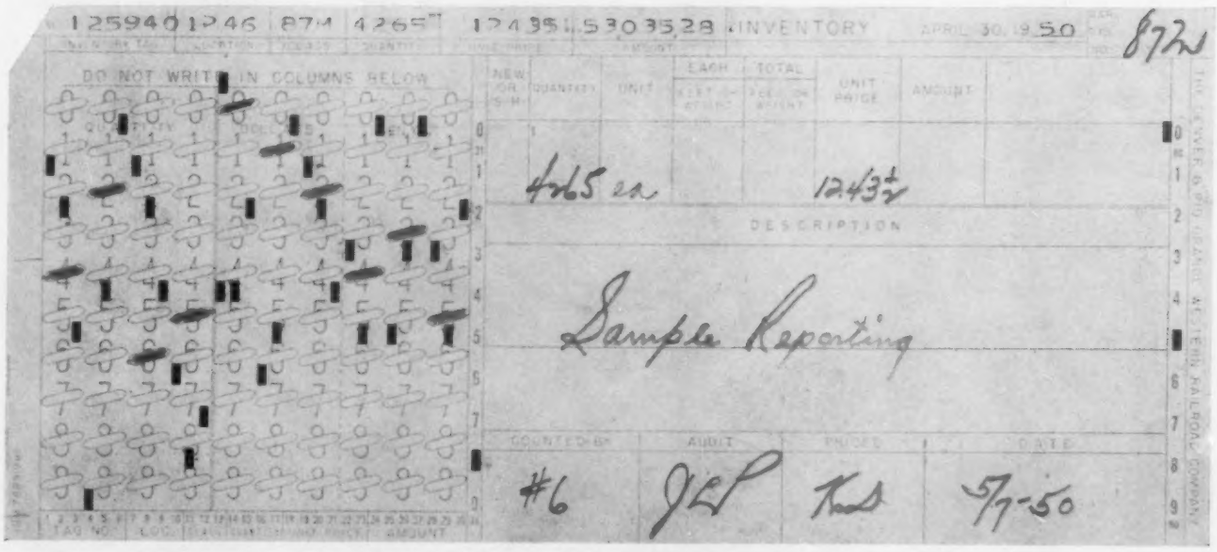


Fig. 2

In the machine bureau A.A.R. class is gang punched and the mark sensed information of number of units and unit price is reproduced into cards by the Model 519 reproducing summary punch (See Fig. 2). Cards are then extended to amounts by use of model 602a multiplying punch.

Any cards for special items of material that require special handling are rubber stamped "extend manually" by the stores department forces and are so handled in the general offices before being delivered to the tabulating department for punching and collation with the machine prepared cards. Such cards include those for adjustment items for material received and not yet taken to stock record, material paid for and not received, material in transit, etc.

Various listings and tabulations are then prepared for separate store and system reports by sorting the cards in various sequences as to location and class of material.

Cards are all interpreted and sorted in A.A.R. class by store locations for filing. They are then microfilmed for the general office record and returned to the stores as a card index of material on hand. The cards are retained at the store for the two-year retention period required by the Interstate Commerce Commission and then destroyed.

We use only the first ten mark sense digits as our Model 519 is only equipped for this number of digits. In the event machines have greater mark sense capacity, it would be possible to also mark sense A.A.R. class and save this one hand sort we are forced to make.

This present inventory tag method has added some work to the division stores but has been received very favorably by them. They much prefer the individual tags to the old write-up sheets, and, though our actual wage saving has not been large, we are now completing our closing of the inventory much sooner and easier. We also are able to produce more and better statements for the management.

New Payroll Procedure on

By T. H. COOPER
Vice-President and Comptroller
Canadian National

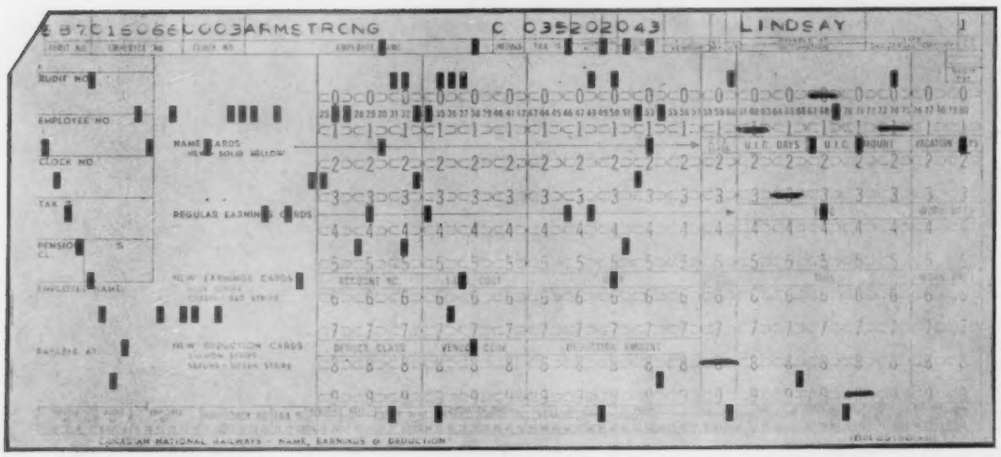


Fig. 1.
Name card

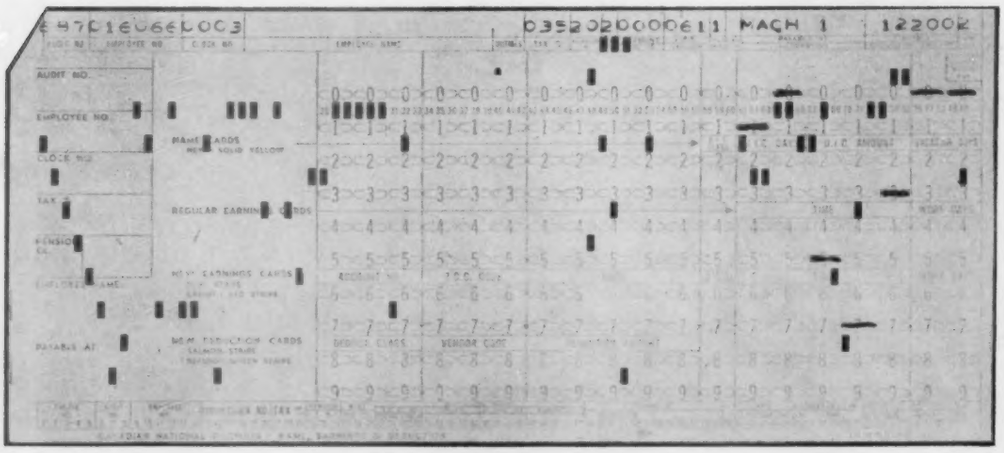


Fig. 2.
Earnings card

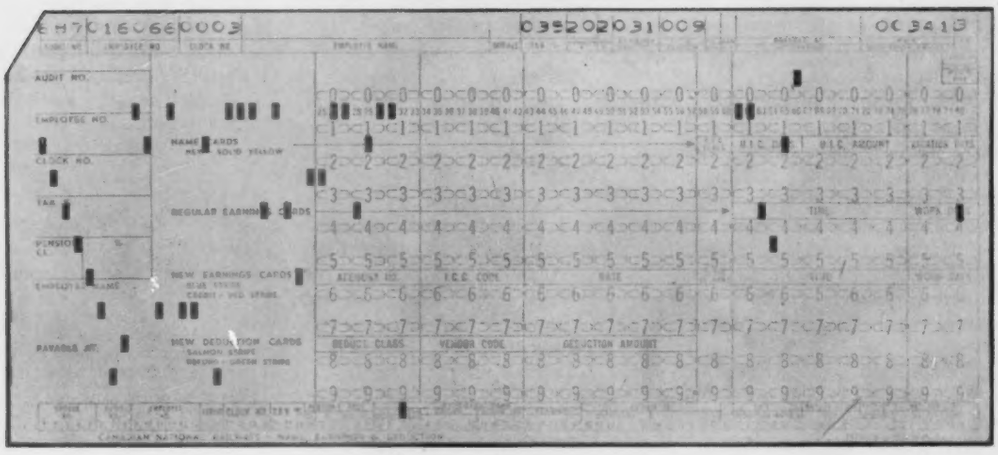


Fig. 3.
Deduction card

Canadian National

Within the past year the Canadian National, in its Central Region office at Toronto, has changed the payroll procedure from a manual to an electric accounting machine operation. At the time of the change, the Canadian National also pioneered in the "mark sense" plan of payroll procedure. The mark sense plan is designed to enable data—pencil-marked on cards at source or by timekeepers—to be converted by high speed machines to punched hole form on the same card. This eliminates key punching—except for alphameric punching and certain fields beyond the mark sense range—thereby reducing substantially the number of man-hours required in the preparation of payrolls. Other advantages accruing from the operation include economy, flexibility in meeting changing conditions and automatic by-products from the cards used for payroll purposes. All records such as employees' earnings, pensions, income tax, deduction lists and controls are available from the same payroll cards.

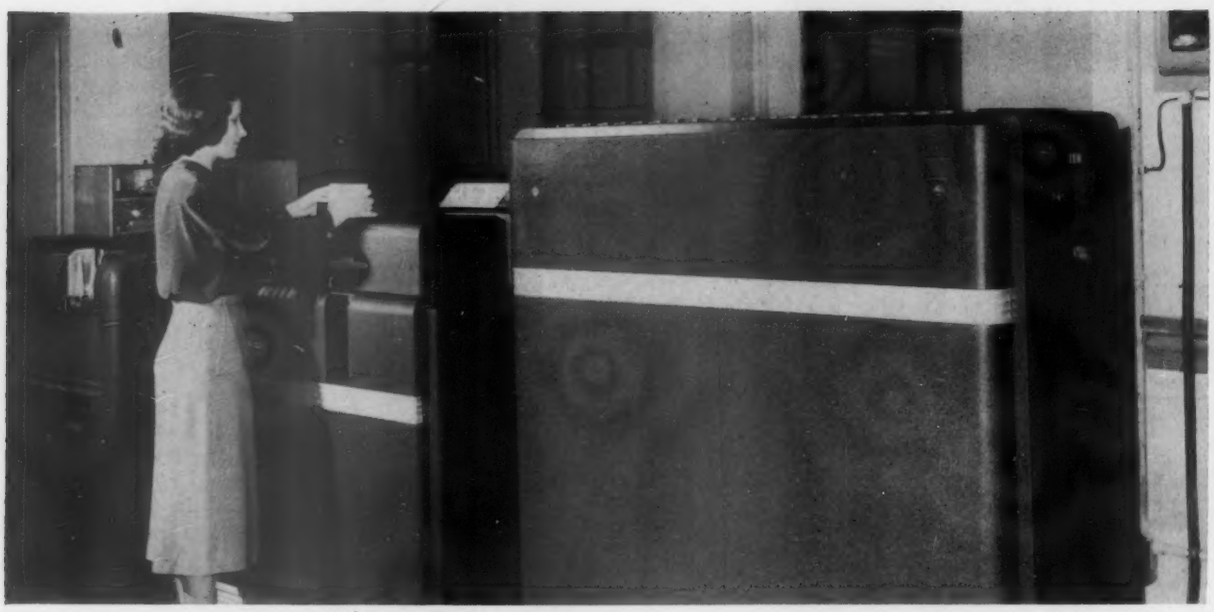
The machine operation consists of: (1) a mark sense plan for processing time to the machine bureau for all forces other than the so-called "B" forces or running trades (train and engine service); (2) a combination of mark sense and key punch plan for the "B" forces. In the mark sense plan the timekeeper, simply by pencil-marking the cards in proper fields, is responsible for the completion of all cards for each employee. (Name, earnings and deduction cards, however, have been automatically reproduced and interpreted from those of the previous pay period.) The timekeeper completes all factors of time from gross to net, with the exception of arithmetic and final calculation, which is done on the calculating machine in the machine bureau. The combination mark sense and key punch plan used in the preparation of "B" force payrolls provides for key punching all daily trip tickets, while name and deduction cards are mark sensed by the timekeeper.

Under the mark sense plan of payroll procedure for "A" forces (maintenance of way, maintenance of equipment, etc.) name card (Fig. 1), earnings card (Fig. 2), and deduction card (Fig. 3), are reproduced by the machine bureau from the previous period cards and are routed to the time and labor section. When the timekeeper has completed timekeeping of basic time reports, he then records employee's time and deductions on the following cards:

Name Card: These are checked for name, audit number, income tax, pension percentages and point payable. Since all of this information is automatically reproduced, only a cursory examination is required, except where any change is necessary, in which case the timekeeper fills in the spaces on the left of a blank card showing all the required data, which is subsequently key punched. The timekeeper then, by the mark sensing operation, marks unemployment insurance deductions, class, days and amount. As illustrated in Fig. 1, mark sensing shown indicates Class 8, 13 days, $0.91.

Earnings Card: The timekeeper checks the employee's rate which, in Fig. 2, shows $1.22 per hour; also checks class of work, column 59, which in this case, showing Class 1, indicates straight time, the latter being required for the compensation report. The timekeeper then completes the card by mark sensing hours worked or to be paid for, which, as shown in Fig. 2, indicates 105.73 hours, including clock recorded bonus time. (To establish the number of employees in the middle of the month, the timekeeper, during the first period, mark senses "received pay" field on top right of the card, which is also necessary for the compensation report.) If other than regular time is earned, the timekeeper mark senses an additional earnings card which, if similarly earned in the previous

Mark sense posters assist timekeepers in preparing name, earning and deduction cards



Gross pay is figured, income tax and pensions are calculated, deductions are applied and net pay is established in one operation in the electronic calculator

This machine reproduces mark sensing and gang punches common data and progressive check numbers in one operation

period, is a reproduced card, otherwise an additional card.

Deduction Card: The timekeeper selects cards for the corresponding pay period of the previous month—i.e., the July first period cards are used to reproduce the cards for the deductions in the first payroll period of August—and inserts them behind earnings cards. [In the case of nonrecurring deductions, the timekeeper establishes a deduction card by mark sensing deduction code and deduction amount on a deduction card prepunched for this purpose. (Fig. 3).] The group of employees' card files comprising each payroll unit are then forwarded to the machine bureau with a covering route card.

In the machine bureau the following operations take place to complete the payroll and pay checks:

1. Key punching for correction, such as changes on name card or occupational rate and code change on earnings card;
2. Cards are processed through the gang punching machine to perform three operations simultaneously;
   (a) To gang punch common data such as income tax and pension percentages;
   (b) To read the mark sensing and transform it into punched holes automatically;
   (c) To punch a progressive pay check number into the cards.
3. On an electronic calculator, earnings cards are calculated and punched as to gross earnings, income tax, pensions and net, in one operation, and are checked in a separate operation by working equation back to zero;
4. Payroll is prepared from completed deck of earnings cards;
5. Using the same deck of cards, with a change in the machine control panel, the checks are prepared and summary card is automatically produced.

Under the combination mark sense and key punch plan for train- or engine-service employees, the key-punched daily trip tickets cards are used to produce the time book and summary earnings cards. The collation of the summary of earnings cards and the name and deduction cards is a machine operation. The procedure thereafter in the machine bureau is similar to that enumerated above for "A" forces.

A further apparent benefit under the mark sense plan is the feasibility of extending its use into the field. For example, in recently placing a payroll of one of the larger terminal freight stations on the machines, it was arranged to have the timekeeper in the station submit to the accounting department a complete deck of mark sensed cards, including name, earnings and deduction cards. Studies are contemplated, but not yet undertaken, to establish the mark sense plan of operation to (1) recurring rental accounts for rental of lands and trade sidings; (2) details, by stores, of material and supply balances; and (3) separation of operating expenses by divisions for budget purposes.

On the Central Region of the Canadian National Railways there are approximately 48,000 employees.

$500,000 Annual Savings Result From B. & O. Methods Group's Work

By W. L. PRICE
Vice-President, Accounting and Freight Claims
Baltimore & Ohio

The office methods and procedures department was established in 1945 on the Baltimore & Ohio as a function of the president's office. It was organized to study paper-work operations so as to reduce clerical expense, and at the same time improve service to our patrons. The benefits obtained (an annual payroll reduction of $500,000, plus better service for our patrons) have fully justified the setting up of this department in our organization. These results were accomplished principally through streamlining procedures, forms and reports, abolishing duplication, establishing standards, and installing modern office machines and equipment.

The methods and procedures department was made directly accountable to the president's office to give it an impartial status, plus the authority to survey methods of all departments. However, the department *does not function as a detective or inspection agency;* rather, it supplements the work of the staffs of various departments in their efforts to speed up the installing of improved procedures. It has the job of collecting the facts on present procedures, analyzing them, and developing better and more economical ways of doing the work. Any changes recommended by the methods group must be agreed to—and authorized by—the department head, before they are put into effect. Finally there comes the job of installing the new methods and equipment, plus the training of employees in the workings of both the equipment and procedures.

Had Executive Support

One of the reasons this approach has been successful on the B. & O. is because the methods and procedures group, from the first, has had the backing of the president and members of his staff. Initially, a steering committee was appointed by the president to help set up the department. This committee, which consisted of the executive assistant to the president, vice-president—accounting and freight claims, and vice-president—personnel, worked with the manager of office methods and procedures in laying out the first program and in selecting some of the methods department personnel. The steering committee met at regular intervals, reviewed the progress of the operations, ironed out some of the early problems and in other ways helped the department get under way.

Beyond this point the responsibility became that of methods department personnel, to see that working relationships were developed which would promote the sort of results desired by management. Without the teamwork developed with the supervisors, union officers and other personnel, this job simply would not have been done. It was the combined efforts of all these people that brought about the savings and other benefits.

A substantial part of these results probably would have been realized in time by the departments without the assistance of office methods and procedures. However, results are slower than when methods and procedures personnel do the job. Trained methods men know how to use the tools adapted for methods analysis. They also are more objective in their approach because they are not as close to the work being analyzed as are persons who have direct responsibility for the surveyed department's output. Once they begin a study they can carry it to completion without fear of interruption by other activities.

Methods men are well posted on the use of office machines and equipment and keep up-to-date on the various types available, and are generally familiar with industrial procedures for clerical operations comparable with those employed by railroads. In addition, methods personnel serve to stimulate the thinking of department personnel about methods problems. This frequently brings about further improvements. Thus, the methods department's approach, together with facts, figures, and recommendations submitted, provide the office head with a more objective and complete picture than he usually can get from his subordinates.

Differences Ironed Out Early

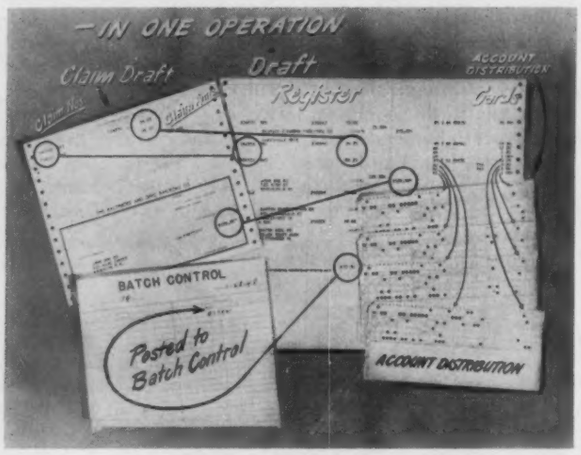
It is the practice of the methods group to clear all proposed changes with heads of the sections or subdepartments involved before any recommendations for adoption of a plan are presented to the office head. If methods people and the section heads disagree on any point in the plan, differences are ironed out at this point or, if necessary, a trial period is authorized to measure the actual results to be obtained.

When changes are authorized they are installed on a progressive basis to cause as little interruption as pos-

Fig. 1—All freight claims under investigation awaiting reply to letters are filed in this 24-ft. Trans-Dex in numerical order. Presorted incoming mail is matched with the claims, which are then sent to the investigator assigned. The operator's swivel posture chair and desk are one unit, mounted on ball bearing wheels. The entire unit easily rolls on metal track, to any desired point. Trays of 3 in. by 5 in. index cards, mounted above the Trans-Dex, are on ball-bearing wheels, and are readily moved from one position to another

Fig. 2 (Above)—Metal desks are provided to aid the investigator in his work. New claims and claims under investigation, with incoming correspondence attached, are numerically filed in specially designed drawers

Fig. 3—This is the Remington Rand "Synchro-matic" with Standard Register Company dual feed and automatic line finding device attached. The tabulating card punch is electrically activated by operation of the bookkeeping machine. Dual feed equipment permits feeding two different widths of continuous forms, each moving over the platen independent of the other. In one operation the Synchro-matic (a) types the check; (b) prints the register, showing a complete carbon of check with claim reference, statistical data and account distribution; (c) automatically verifies transcription of amounts; (d) adds columns of figures as required; and (e) punches tabulating cards for charges to various accounts. Upon completion of a check, a single hand motion spaces the next check to its first writing line, while the register moves but one line space. (Seen in the background is a circular Sav-A-Sort, used to sort and accumulate distribution statements against other railroads)



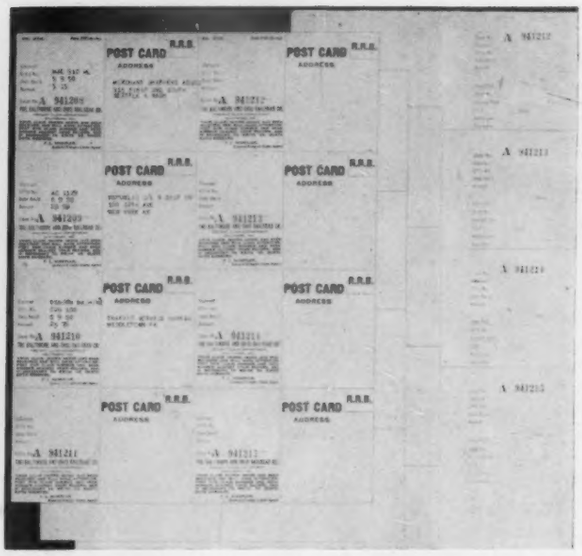
sible to the regular duties of the office and to allow for absorbing personnel whose jobs may be abolished. Retirements and normal turnover usually can be depended upon to reduce the force within limits required to operate under the improved procedures.

After procedures are installed and the personnel trained, audits of the new methods are made periodically to see that they have been continued in effect. At that time adjustments are made that may have become necessary to further improve the operation.

The first studies in our company were made in the general freight claim office and in the accounting and billing sections of freight stations. Studies were begun here for several reasons: (1) A considerable part of the work of these offices involved a large number of clerical operations which could be adapted to mechanization and quick savings thereby obtained; (2) large backlogs of work had accumulated during the war years; (3) mechanization and streamlined methods appeared to be a way to break the bottlenecks and thereby improve our service to the public; and (4) since accounting procedures cut across the work of other departments, it

BEFORE

Fig. 4—Acknowledgment cards were formerly prepared on a flat-bed billing machine, eight to a sheet. Carbon paper was inserted manually. Three of the sheets were manually cut into 3 in. by 5 in. cards, and the other bound in numerical order as the "claim register." When claim was ready for payment, pay vouchers were hand written



AFTER

Fig. 5—Both the 3 in. by 5 in. cards and an 8½ in. by 11 in. pay voucher are typed in a single operation, on continuous form with one-time carbon. Equipment consists of an I.B.M. Electromatic typewriter, with a Standard Register Company dual feed and two automatic line finders. As one card is completed, the line finding levers bring both of the next forms to the first writing line

Fig. 6—Forms are mechanically separated and trimmed. (1) Alphabetic index card; (2) post card, mailed to claimant; (3) investigator's file card; (4) claim register sheet, bound four to a page, in numerical order. The last copy is a legible pay voucher, partially completed with claimant's claim number, name and address, for later use.

was felt that the study of these procedures would point up areas for further surveys. In addition there was a keen interest on the part of the accounting department officers to improve their clerical operations as rapidly as possible.

While these two studies produced an annual payroll saving in excess of $250,000, other benefits also were obtained for the company. In the freight claim department, for example, the number of claims disposed of in 24 hours from the time they were received increased from 30 per cent to 67 per cent of total receipts. The claim backlog was reduced by 60 per cent, which in turn substantially reduced correspondence. Further, claim payments were itemized on statements mailed out to patrons with their checks.

In 90 freight stations, where a new accounting system was installed, a higher standard of performance developed. Patrons' bills had fewer mistakes, backlogs of billing corrections were substantially reduced, and currently fewer corrections were required. The new system brought about a closer follow-up of outstanding charges which were reduced by 20 per cent. At present freight bills are held until freight is unloaded from cars, while statements showing itemized freight charges are submitted to patrons along with their bills.

As a result of the studies made by the methods de-

Clifford A. Strickland
Manager, Office Methods
and Procedures Department

partment in the freight claims office, many operational improvements were made. For example, active claim files were centralized and file cabinets replaced with a Trans-Dex (Fig. 1). Incoming mail now is attached to claims in the Trans-Dex by file clerks and sent to investigators. Investigators interfile this material with other current work in specially designed drawers of their desks (Fig. 2). (Meanwhile semi-active claim files were transferred from another part of the building to the claim office where they were more readily available.) Savasort equipment and pigeon-hole sorting were provided in lieu of table-top sorting. The mail operation was analyzed and special equipment built to carry on that work. All typing work was transferred to the typing pool and electric typewriters were installed.

The accounting work which had been done manually was placed on a mechanized basis, using bookkeeping machines and synchronized punch card equipment (Fig. 3), together with special sorting and other devices.

Nor were forms neglected. All reports and forms were analyzed and many were eliminated. Other forms were redesigned. Continuous forms with carbons interleaved were substituted for single copies on high volume jobs. Where information was common to two or more forms, machines and devices were installed where they could be prepared at the same time (Figs. 4, 5 and 6).

The layout of the freight claims office was rearranged to get the best flow of work between sections, in order to eliminate bottlenecks and back tracking. Production standards were established, and procedures were streamlined to eliminate unnecessary work and duplication and to rearrange the sequence of operations to improve the efficiency. The number of different pay rates was reduced and job descriptions rewritten to obtain more flexibility in use of personnel on various types of work. Far from least important were the production control reports which were installed to permit better supervision of the daily operation.

These are some of the many points covered by a methods and procedures audit of an office. The "know-how" and cooperation of everyone involved are required to make it a success.

New Books . . .

THE TRAFFIC DICTIONARY, by George T. Stufflebeam. Fourth Edition, enlarged and revised. 292 pages. 6 in. by 4½ in. Bound in Fabrikoid. Published by Simmons-Boardman Publishing Corporation, 30 Church st., New York 7. $3.75

If you want to find—in a hurry—the meaning of "ab initio," "plimsoll mark," or any other of some 1,800 terms used in the traffic profession; if you need to use, or to interpret, abbreviations with traffic usage, from A (acceptance) through Zn. (zinc); or find the reporting marks of railroads, car lines, ship names or code letters, the fourth edition of George T. Stufflebeam' "Traffic Dictionary" is your source. It is a handy, pocket-sized reference book which should be in every railroad or industrial traffic office. It is a practical handbook of value to anyone who ships, stores, receives or transports goods by rail, water, express, parcel post or motor truck.

The author is manager of transportation methods and research for Remington Rand, Inc., where he is in daily contact with practical traffic problems. The popularity of the three earlier editions of the "Traffic Dictionary" perhaps best attests to the usefulness of this publication.

PATENT PRACTICE AND MANAGEMENT. By Robert Calvert, Ph.D., patent attorney. 371 pages. 9½ in. by 6¼ in. Bound in cloth. Published by the Scarsdale Press, Box 536, Scarsdale, N.Y. Price, $5.

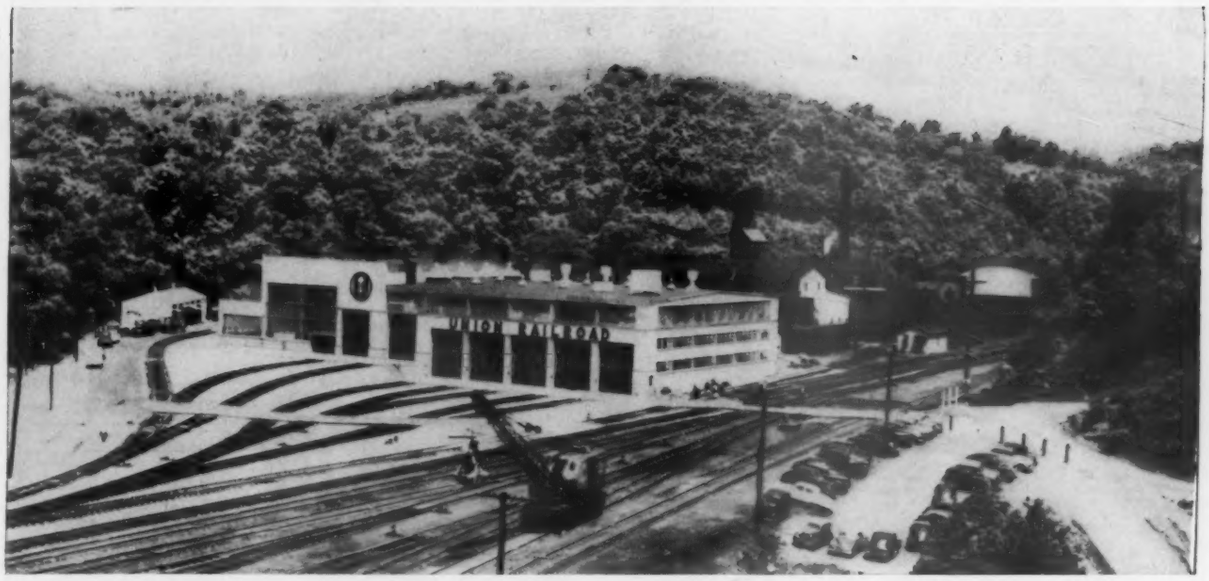
The primary subjects discussed in this book for inventors and executives are how to obtain patents, how to use them and how to administer the patent policy in such manner as to stimulate research and invention, improve morale of an organization, and serve the interests of the sponsor who makes the inventions possible in the first place. The patent law itself is given in some detail as an aid in forming judgment in patent matters. It is presented in simple words, illustrated by representative examples from American industrial history, with occasional use of language from decisions of outstanding jurists.

THE EFFECT OF BRAKE SHOE ACTION on Thermal Cracking and on Failure of Wrought Steel Railway Car Wheels. 104 pages. 9 in. by 6 in. Bound in paper. Issued as Series No. 387; Bulletin of the Engineering Experiment Station, University of Illinois, Urbana, Ill. Price, 60 cents.

This bulletin is a report of the progress that has been made to date on the investigation of steel car wheels being conducted by the University of Illinois Engineering Experiment Station in cooperation with the Technical Board of the Wrought Steel Wheel Industry. On some phases the investigation has been concluded; others require additional work. Laboratory tests were made on 369 wrought-steel railway car wheels. Two types of tests were performed: (1) the wheels were stopped from high speed by using high brake shoe pressure, and (2) the wheels were tested under long-continued applications of the brake shoes. The stop tests were intended to produce thermal cracks in the wheel treads. The long-continued brake shoe applications were intended to produce fractures through the rims and plates of the wheels. In both types of tests the conditions imposed on the wheels were more severe than the wheels should receive in normal railway operation.

The studies of the effect of carbon content of the wheel material, various methods of heat treatment, and changes in wheel design, together with a qualitative analysis of the stresses developed in the wheels are presentd.

The results of the tests are summarized in Chapter IX. The conclusions apply only to the types of wheels tested. These do not necessarily represent all wheels made by the various manufacturers. The types of failures, however, are in close accord with experience in service.



The new Diesel inspection and truck repair shop adjoins the Union's steam roundhouse at Hall, Pa. Major repairs and overhauling on all the company's Diesel locomotives will continue to be done in a shop built there in 1944

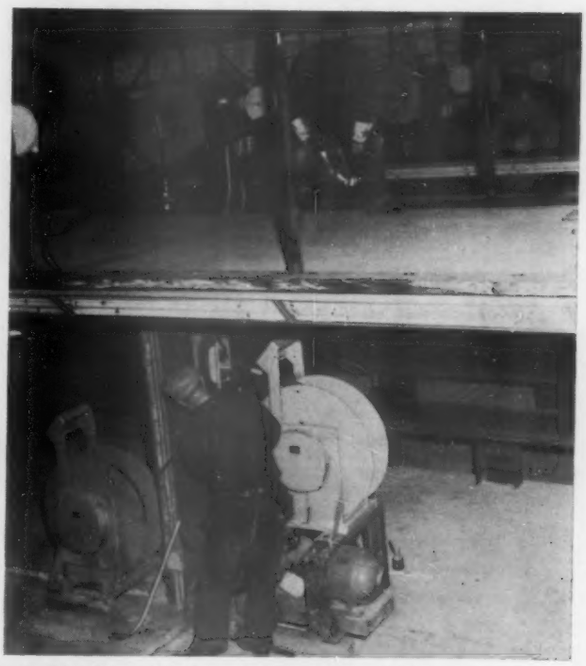
Diesel Shop Exhibits New Design Features

Structure recently completed by the Union Railroad combines the latest practices with further advances designed to enhance its efficiency and effectiveness

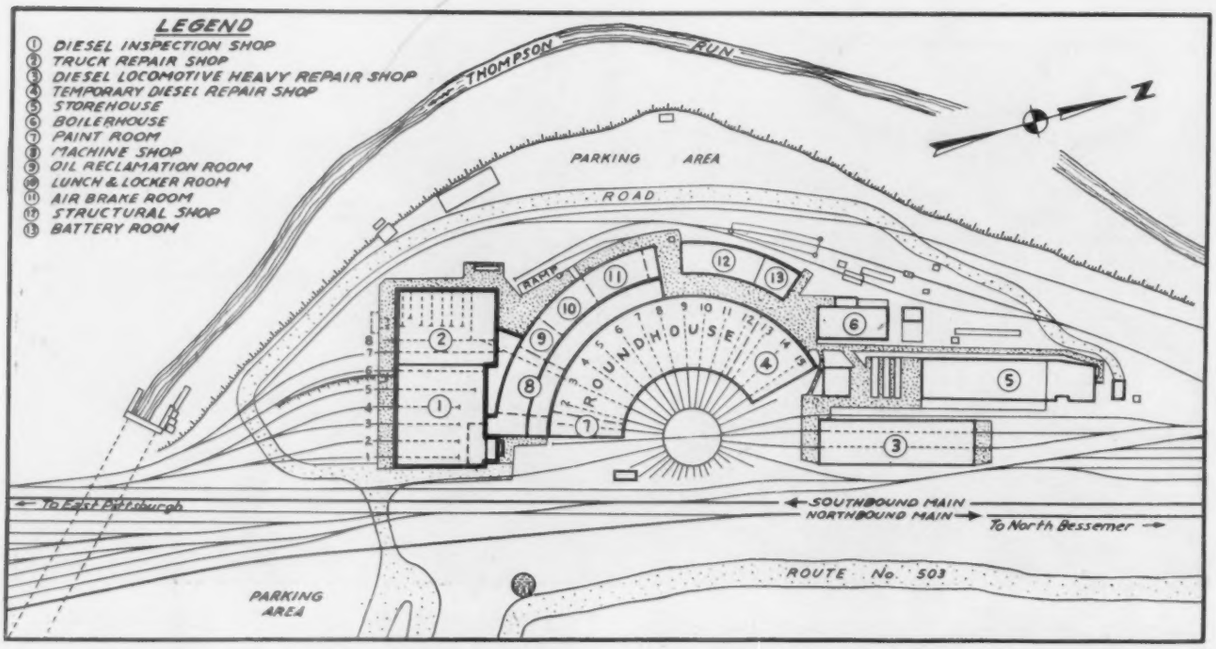
To augment the facilities it has built over the years to handle the servicing and repair of its growing fleet of Diesel-electric locomotives, now numbering 110 units, the Union Railroad has constructed a large Diesel inspection and truck-repair shop adjacent to its steam locomotive roundhouse at Hall, Pa. In every respect the new shop is of the most advanced design. It incorporates a number of unusual features, including truck-repair tracks placed on the same level as the upper working platforms; exhaust ducts of a new and different design; the use of 20 different shades of color in painting the interior; and a heating system that combines radiant heating with a warm air plant that will also be used to distribute fresh air during the summer.

The building is essentially a simple rectangular structure modified slightly by connections to the enginehouse. The shop is of the transverse type, tracks entering the long side of the building. All tracks are stub-ended and designed generally for the occupancy of one engine each. This avoids the possibility of tie-ups of locomotives ready to be moved.

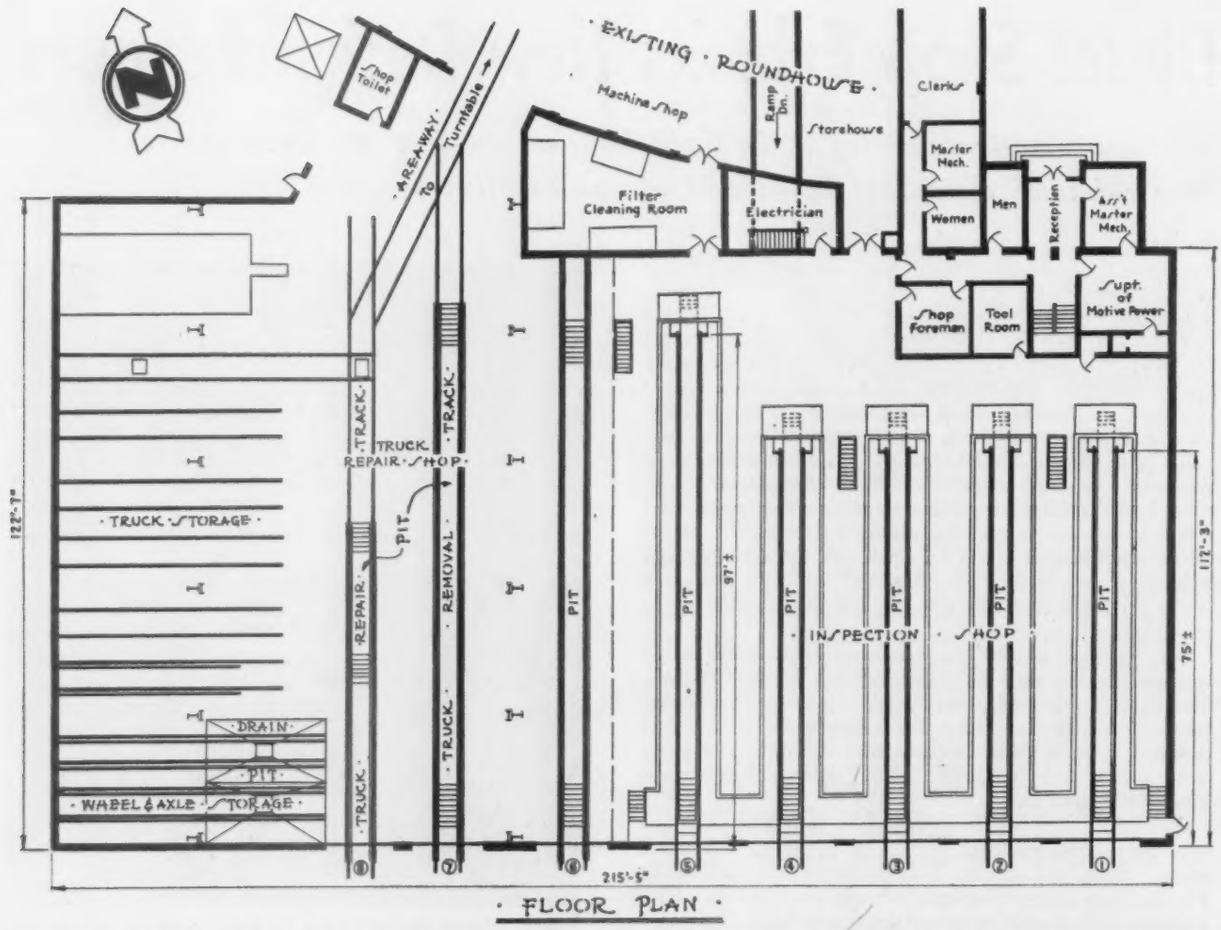
The entire building is arranged in four main sections —inspection shop, truck repair shop, wheel and truck storage area, and offices. The inspection shop is 112 ft. by 124 ft. with five inspection tracks on the lower level and one light repair track on the upper level. The truck repair portion is 65 ft. by 123 ft. with one truck removal



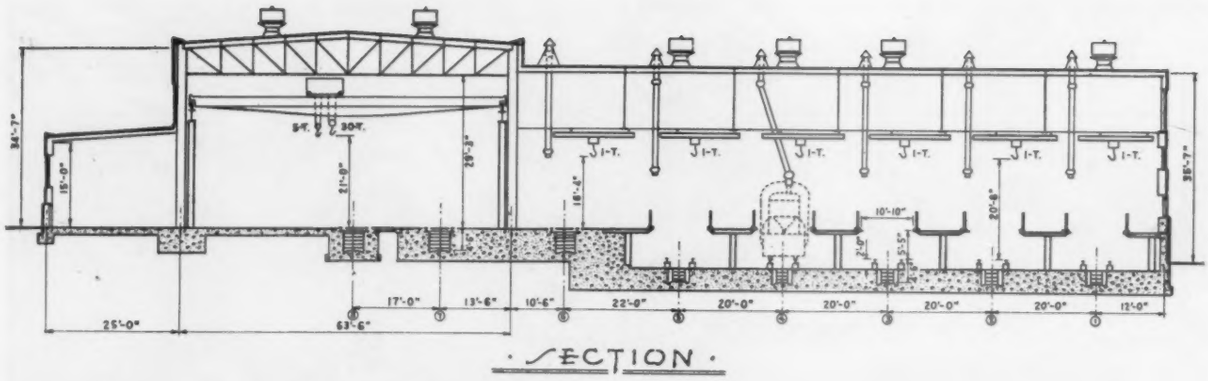
The cantilever design of the working platforms permits unobstructed operations at the lower working level



The relationship of the new Diesel shop to the existing facilities at Hall is shown here



The shop is of the transverse type with the tracks designed generally for the occupancy of one engine each



The cantilever design of the upper working platforms and the placing of the floor level in the truck-repair section on the same level as these platforms are features illustrated by this cross section of the shop

track and a truck repair pit. The wheel and truck storage area, 26 ft. by 123 ft., joins the truck repair shop and is made up of seven stub storage tracks 25 ft. long. In the northeast corner of the building, 2,600 sq. ft. of additional office space is provided.

Site clearance was a major undertaking in beginning this project. It involved tracks, a six-car garage, offices, wheel and axle storage area, sewers, telephone and power lines, parking lot and a roadway. After the site was prepared, it was necessary to perform much miscellaneous construction prior to commencing the building proper. This included hillside excavation, concrete arch alteration, additional embankment, tracks, power lines, sewers, septic tank, grease interceptor chamber, roadway, and parking lots.

Foundations and Drainage

The topography of the natural ground surface on which the building was constructed presented an unusual foundation problem. The northeast corner of the building sets on hard shale, while the southwest corner is constructed on 42 feet of fill that had been deposited during the past forty years. Test holes were drilled to explore the subsurface condition and the embankment was found to be satisfactory. To insure a minimum of settlement, however, all foundations were designed for a maximum soil pressure of one ton per square foot.

Since the whole floor of the shop generally involves a foundation of some kind, the entire building area was excavated one foot below the bottom of the concrete. Ten thousand cubic yards of material were removed. This subgrade area was then rolled with a 10-ton roller, after which the surface was brought to a true plane for the placing of concrete by depositing approximately 12 inches of granulated slag which was similarly compacted.

Floor and platform drainage is provided by a generous number of grated trenches and circular inlets. The greatest distance water must travel to reach a drain is only 12 feet. To insure prompt run-off, the floor surface, except platforms, has a minimum slope of ¼ in. per ft. Where tracks are embedded in concrete, the rail flangeway is sloped and serves as a channel for carrying water to a drain. A continuous grated trench was constructed just outside of the rolling doors to intercept storm water and melted snow, preventing it from entering the building. More than a mile of cast iron soil pipe was required to construct this complete drainage system. No terra cotta or concrete pipe was used.

One of the most unusual features of this shop is that the platform level is the same as the truck repair shop, as well as that of the old machine shop and enginehouse. In most Diesel shops the inspection tracks and shop are made at the same level, with platforms elevated.

A ramp, 8 ft. wide on a 15 per cent grade, leads from the lower level up to the old machine shop. Several openings for ingress and egress have been provided to connect the new and old shops. A track for handling trucks and wheels extends from the enginehouse through the machine shop into the new truck repair shop.

The platforms are of the cantilever design, eliminating obstructions from columns adjacent to the tracks. Pits are designed with a ramp at one end so that air cylinders or other heavy equipment can be rolled out on a buggy that is designed to travel inside the pits.

The building frame utilizes steel columns and steel roof trusses. The walls are corrugated transite, corrugated wire glass, and steel sash with clear glass. Buff brick inset with rows of brown face brick is carried from foundation up to the bottom of the sash. Flat transite was used on the interior to back up the corrugated transite. Stainless steel was used for wall flashing and fastenings. The motor-driven rolling doors operate by push button control. Safety switches reverse the movement of closing doors when any obstruction is encountered.

Lighting and Heating

The general lighting for the entire shop is a combination of mercury vapor and incandescent, utilizing the high efficiency of the mercury vapor with color correction provided by the incandescent units. A continuous row of specially designed twin-tube fluorescent fixtures is installed along the edges of each platform. Additional fluorescent lighting is provided underneath the platforms and recessed in the pit walls. All fluorescent fixtures have instant start equipment and are covered with clear shockproof glass.

To provide a comfortably heated building, as well as an adequate supply of fresh air, a combination of five types of heat distribution was used. They are: radiant heating, circulating hot air, fin-tube convector radiators, cast iron steam radiators and hot air blast heaters.

Three miles of 1-¼ inch steel pipe is embedded in the concrete floor including the pits, for the radiant heating system. There are no pipes in the platforms. Steam from the boiler house is delivered to the new shop, the pressure reduced, and sent to a large heat exchanger. Here the steam heats water to be circulated under pressure through the radiant heating coils.

When the outside temperature gets so low that the radiant heating system will not adequately warm the

Telescopic circular tubes discharge engine exhaust fumes directly to the outside atmosphere

Retractable hose reels are used extensively in the shop for handling compressed air, treated cooling water, and both fresh and used lubricating oil

building, a thermostatically controlled circulating warm air heating plant will commence operating. This consists of a system of duct work connected to unit heaters utilizing fin-type steam coils to warm the air and centrifugal type fans to distribute it. The inlet ducts receive air from the outside through roof ducts and from the shop at an elevation of about four feet above the floor, while the discharge ducts deliver warm air to the shop at an elevation of approximately ten feet above the floor. When the outside temperature is above 15 deg. F., these unit heaters will constantly mix fresh outside air with that received from the shop. When the outside temperature is below 15 deg. F., no exterior air will be admitted.

One row of 2-inch diameter fin-tube convector radiators is located along the bottom of each panel of corrugated wire glass to prevent the formation of condensate, frost, and ice.

All offices and toilet rooms are heated with cast iron steam radiators.

To prevent a sudden chilling of the shop when the large rolling doors are opened, a hot air blast heater is located between each pair of doors. These heaters automatically begin operating when the door is opened and likewise automatically shut off when it is closed. The duct system from these heaters is so designed that the cold air entering through the open door is immediately tempered by lateral and downward blasts of warm air. These unit heaters utilize fin-type steam coils to warm the air and a propeller type fan to distribute it.

Ventilation and Exhaust Ducts

The adoption of telescopic circular tubes for discharging engine exhaust directly to the outside permitted the use of a minimum number of the conventional power-driven roof ventilators. In addition to eliminating any

trace of Diesel engine exhaust fumes in the building, this design insures a comfortable environment in cold weather, as well as economy in heating.

The warm air heating system is designed to recirculate the air within the building and to mix it with fresh air from the outside. This distribution system will be used in both winter and summer. Fresh air is spread throughout the lower level from continuous grills located along the north wall near the ceiling. These openings are connected to a reinforced concrete plenum chamber constructed below the floor. This plenum chamber receives fresh air from the outside through a roof stack. As the air is received, it passes through a unit heater which tempers it in the winter time and merely serves as a means of distribution in the summer.

With all doors and windows closed, the mechanical ventilation will accomplish complete changes of air in the building at the rate of ten times per hour. Additional ventilation is provided by the use of manually operated steel sash.

Through extensive research, the railroad developed the adjustable ducts that were adopted to discharge fumes directly from the engine stack through the roof. In the interest of conserving weight and making the ducts easy to handle, they were constructed of 16-gage 61S-T6 aluminum. They consist of a 12-¾-in. diameter upper cylindrical tube inside of which slides a 12-in. diameter lower tube. A cast aluminum ball joint is used at the top and bottom. The upper tube and ball joint are attached to the roof. The lower tube with its ball joint is counterweighted by means of two small cables and a pulley system to provide finger-tip control. Sixteen of these ducts were used so that exhaust can be discharged from a locomotive stack at any point along the tracks in the inspection shop. Small lightweight aluminum adapters are used to connect the lower ball joint with the various sizes and shapes of locomotive stacks.

Services to Tracks

Tracks in the inspection shop have all of the facilities readily available for performing any kind of service with the exception of fueling and sanding, which are done at the outside station. Retractable hose reels are used for compressed air, treated water for radiators, fresh lubricating oil and used oil. Tap water, high pressure steam, and high pressure steam mixed with water, are available at fixed locations. Retractable reels are used for 110-volt extension wires. Fixed electrical outlets consist of 110-volt, 220-volt, and battery charging.

The fresh lubricating oil is pumped to the inspection tracks and the used oil is pumped away from them by centrifugal pumps. In all cases, these pumps are located at the source of the oil and operated by remote control. This was done to reduce necessary suction. Fresh oil is stored in a 14,000-gallon underground tank south of the building. Used oil is pumped to a 7,000-gallon storage tank above ground on the west side of the building.

Used lubricating oil is reclaimed by pumping it from storage to a room in the enginehouse where it is refined in a 200-gallon Gustin-Bacon Refinoil machine. From this machine it is pumped through filters to an intermediate tank where it is tested. If it meets specifications, it is then delivered by pipe line to the underground fresh-oil storage tank. To insure continuous ease of flow, all pipes carrying lubricating oil are kept warm with steam chaser lines. Provision is also made for warming the oil in storage tanks.

Each of the six tracks in the inspection shop is equipped with an individual overhead one-ton crane for its entire length. The bridge of this crane is moved manually; the trolley and hoist are operated electrically by push-button-pendant control. The truck repair shop is equipped with a 30-ton overhead crane having a 5-ton auxiliary hoist. This crane is completely operated by push-button-pendant control.

PARTIAL LIST OF CONTRACTORS AND SUPPLIERS OF MATERIALS FOR THE UNION DIESEL SHOP

Siding, asbestos	Johns-Manville Corp., New York
Cranes, 30-ton overhead	Harnischfeger Corp., Milwaukee, Wis.
Panel boards, electrical	Cleveland Switch Board Co., Cleveland, Ohio
Exhaust ducts	Kirk & Blum Manufacturing Co., Cincinnati, O.
Glass, clear	Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Lighting fixtures, overhead mercury vapor	General Electric Company, Schenectady, N. Y.
Oil reclamation	Gustin-Bacon Manufacturing Co., New York
Paint	Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Pipe	National Tube Company, Pittsburgh, Pa.
Pumps and lubricating oil system	Bowser & Company, Fort Wayne, Ind.
Roof deck	R. C. Mahon Company, Detroit, Mich.
Sash, steel	Detroit Steel Products Co., Detroit, Mich.
Substation equipment	Westinghouse Electric Corp., Pittsburgh, Pa.
Thermostatic controls	Minneapolis-Honeywell Co., Minneapolis, Minn.
General contractor	Dick Corporation, Pittsburgh, Pa.
Superstructure contractor	American Bridge Company, Pittsburgh, Pa.
Registered architects	Kuhn & Newcomer, Pittsburgh, Pa.
Plumbing, heating and ventilating contractor	George Neidermyer, Glassport, Pa.
Electrical contractor	Allegheny Electric Company, Pittsburgh, Pa.

The locomotive doors in the building are of the motor-driven rolling type, operated by push buttons

Train used in grease lubrication tests—the New York Central's "Pacemaker"

Grease Lubrication of Roller Bearings

Operating variables are reproduced only in road service—
Grease characteristics required for use in journal-boxes

By E. M. HIGGINS
Vice-President, Engineering
Master Lubricants Company, Philadelphia, Pa.

GREASE LUBRICATED

Timken

SKF

Today there is real interest in the application of greases to railroad car-journal roller bearings, in line with the trend in all bearing lubrication toward replacing oils with grease.

There are, however, still some who question the replacement of oils by greases—for the most part because they have not had close contact or actual experience with this method of lubrication. These skeptics are not entirely to blame for their attitude, for misapplied and poorly made greases have resulted in some unfortunate experiences for railroad men. Yet there are today a large number of grease-lubricated bearings, designed by leading bearing manufacturers, which have run up exceptional records for millions of railroad operating miles.

The fact is that greases are daily increasing in importance in the field of industrial lubrication. In great measure this is a result of the tremendous advancements of grease technology within the past 10 years.

Why Grease Lubrication?

The ever-increasing applications for ball and roller bearings which must meet conditions of higher speeds, high and low temperatures and decreased maintenance costs, have given impetus to grease research. For the progressive lubricant manufacturer, this has meant meeting the varied conditions of bearing and housing designs as offered by bearing manufacturers plus innumerable operating variables.

The question is often raised as to the advantages and disadvantages of grease versus oil lubrication for anti-friction bearings. It is recognized that each has advantages and disadvantages. Grease lubrication permits simplified housing and bearing design, ease of lubricant retention, versatility of mounting position and ease of maintenance. These have resulted in more economical maintenance and have caused grease lubrication to be used in all but the most unusual applications. As a matter of fact, much lubrication research today is directed toward the replacement of oil by grease in all applications.

While it is true that better quality greases are being made, much study and education on the part of lubricant manufacturers' field men must be done to see that greases are applied to their proper sphere of duty. A grease might be excellent for one application and useless in another.

The idea that "grease is just grease" has been an exploded fallacy for a long time. There is a tremendous difference in the performance of greases even with the same soap base, oil viscosity and consistency. It is therefore necessary to consider the value of greases in terms of performance rather than by the old yardstick of physical test data.

The laboratory performance test might isolate greases which would offer poor or good performance, but the errors here can be both favorable and unfavorable to a product.

It is, for instance, impossible to reproduce the operating variables offered in car journal operation in a laboratory. It is difficult enough to obtain reliable test data for equipment that is bolted down in an industrial plant with operating variables fairly well known and constant. Therefore the true and tangible test data that must be accumulated can come only from actual road operation with all possible variables present. These include vibration, shock loads, heavy thrusts, all temperatures and speeds, and the entirely separate problem of idle cars.

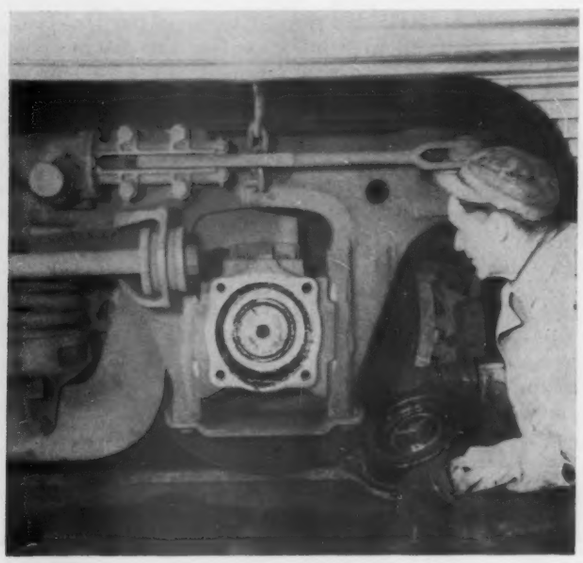
No Compromise With Quality

Careful field studies regarding the suitability of applying greases to car-journal roller bearings were started after a complete summation of the problems involved, namely:

High temperature conditions; low temperature conditions; high speeds; low speeds; heavy thrust and rubbing contacts on bearing flanges and solid thrust blocks; possibility of false brinnelling during idleness, especially where considerable vibration might exist; corrosion; rusting due to condensation; oxidation and gumming; one type and consistency of lubricant which would be suitable for all designs of railroad anti-friction bearings; loose assemblies; miscibility of approved lubricants; cleanliness of the new lubricant itself; color desirability

ROLLER BEARINGS

Hyatt



Fafnir

Applying grease to roller bearing in a railway shop

Preparing to grease roller bearing at a coach yard

of lubricant; and the ease of handling and application.

In choosing a lubricant for this all-important work there was no compromise with quality. The use of any ordinary straight commercially priced lubricants was, in the interest of everyone concerned, kept out of the picture. Railroad car-journal lubrication does not belong in the field of automotive shackle bolt or plain bearing coal conveyor lubrication. You cannot come up with a good, safe lubricant that is made of cheap raw materials.

The softer, well-made lubricants seem to have worked out best over the general problem. Here are the reasons why these types of greases have best met the above requirements:

High Temperature Conditions.—The grease must carry a high melting point so that it will not thin out at elevated temperatures.

Low Temperature Conditions.—The grease must be operable in temperatures as low as minus 40-50 deg. F. This precludes the use of high viscosity oils.

High Speeds.—Fluid friction temperature rises due to turbulence of a lubricant had to be considered. Road tests indicate that temperature rises due to this phase are as low or even lower than straight oil applications. With soft grease, the lubricant film is shifting all the time, no two revolutions in succession being made on the same lubricant film. The soft grease is more sluggish than straight oil, with consequently less turbulence. The life of the grease from a breakdown standpoint is greatly increased with the film constantly shifting out of the load zone.

Low Speeds.—The softer type greases lend themselves to safer operation at low speeds as they are self leveling and do not depend on strong lateral thrusts or heavy shock loads to bring them into actual contact with the moving parts of the bearings.

Heavy Thrust and Rubbing on Bearing Flanges.—This is a most important consideration when choosing grease consistency. All chances of film shear must be eliminated. This has proved to be of great importance in the use of bearings constructed with the solid thrust block. Heavy greases will not handle this problem. A dry or a near-dry thrust block or flange could quickly give trouble, particularly on long curves.

False Brinnelling.—There are times when railroad cars must stand idle for several days or even weeks. Considerable vibration exists at most of these points. If heavy greases are used, steel-to-steel contact of rollers and races might occur, resulting in false brinnelling. A soft grease is liquid enough to prevent this. With oil, it is necessary to roll these assemblies every week or two to prevent corrosion as a result of oil draining off the upper surfaces. With soft grease it is not necessary to do this. The rollers are well covered with grease which stays there even when subjected to high temperatures.

Corrosion.—The grease must be highly stable and form no acids which would induce corrosion.

Rusting.—There are times when considerable condensate might be present in railroad journal boxes. If waterproof greases are used, the water would remain isolated and might cause rust, particularly in the lower race areas. Soda soap greases will pick up the water and form a protective emulsion preventing rust.

Oxidation and Gumming.—Many journal bearing assemblies have bronze retainers. It can be kept in mind

that the rate of oil or grease oxidation with bronze over steel is 3:1 to 5:1. A good, stable grease can easily meet this problem. Gums or other products of oxidation could form with the use of inferior lubricants.

Type and Consistency of Lubricant.—This phase has been thoroughly discussed with several leading railroad operating engineers, and it is universally felt that it is highly desirable to use but one type of lubricant for all four manufacturers' types of bearings. Even one car might have two or three types of bearings installed at the same time. A special lubricant for each would be most confusing and undesirable. For a grease to be suitable for railroad applications, it must be able to handle all types of bearing and housing construction.

Loose Assemblies.—Serious difficulties have been experienced with loose bolts and closure plates. With the use of straight oils, a serious lowering of the oil level can occur, and even complete loss of lubricant supply is easily possible. It will not occur with grease. The fact that grease is an answer to this problem has already been proved in several assemblies during the past year. The railroad engineers concerned felt very lucky that grease instead of oil was in these boxes.

Miscibility of Approved Lubricants.—It must be possible safely to mix the approved lubricants used by any railroad so that no chemical conflict will result with any combination of mixtures.

Cleanliness of the New Lubricant.—Certainly there are enough possibilities of lubricant contamination in railroad maintenance without a new lubricant being shipped in a contaminated condition. The high dirt count in some lubricants when they are new can be very surprising. Periodic checks should be made for dirt count.

Color Desirability of Lubricant.—The opinion that a lubricant for ball and roller bearings should be light in color, rather than dark or black, is continually increasing. If contamination occurs, it can at least be seen and removed by any man interested in doing his work well. The character of many service difficulties can be determined by color changes which can only be noted in a lubricant originally light in appearance.

Grease Color Changes.—Interesting color change phenomena will occur when changing over from oil to a soluble grease. After the bearing has been operating on oil for some time, miscroscopic bits of metallic dust and some road dust will impregnate the bearing surfaces. This is not removed by the oil as it has very little cleansing action. Even solvents will not remove this material. As a result the rollers will always appear dull.

When the grease is applied and is combined with a small amount of moisture, a process of surface cleaning begins. The grease may then turn dark fairly quickly. Later, when the grease is cleaned from the bearing, all rollers will have a bright, clean appearance. This is not the result of any lapping action, it is simply the result of a thorough surface cleansing.

On the second complete application of grease, the color change is very slow. Slow color change also takes place in new bearings. At this point of second application, should the grease turn to a graphitic color quickly, the mechanical forces can look for misalignment, overloads or some mechanical defect in the bearing or car.

Ease of Handling and Application.—A soft grease can be pumped as easily as oil. The practice of applying the lubricant by removing large plugs with consequent dirt entrance can be eliminated with the use of pressure nipples and air or manually operated grease guns. However, with greases, and with the relubrication cycles so greatly extended, it is possibly necessary to remove the plugs only four or five times at the most during the life of a wheel. Therefore it is not necessary to replace plugs with pressure nipples if the railroad does not want to go to this amount of work. The infrequent applications of grease greatly reduce the amount and chances of contamination over the present frequent rate of plug removals for oil application.

Self-Leveling Characteristics.—This desirable property speaks for itself. Softer greases when applied through a nipple or plug opening will level themselves throughout the assembly in a few road-miles. Stiff greases would remain in the front of the boxes indefinitely.

Grease As a Dust Seal.—Obviously grease will form a thicker sealing film than is possible with oil whether temperatures are hot or cold. This goes far toward holding out even filterable dust particles that could enter the housing when hot oils have changed to a thin film.

Comparative Lubrication Values.—Greases have much higher load-carrying ability than straight oils. The load-carrying values of oils are greatly reduced as temperatures rise. There is not much change in the load-carrying values of grease with temperature rise due to the high load-carrying ability of fats which are present in a grease. The softer greases give film distribution equal to that contributed by oil.

High Mileage Obtained

Very high mileage has been obtained on journal bearings without relubrication except at wheel turnings, at which time only a small amount has been added to make up for the loss noted during housing removal.

From the foregoing, it can be concluded that grease lubrication has proved itself eminently suitable and safe for railroad car-journal bearings. Moreover, tests show that in comparison with oil, grease lubrication is highly economical.

Communication . . .

Is Management Disinterested?

To the Editor:

1020 Hulton Road,
Oakmont, Pa.

I have received many proxy forms and am astounded at the large number of nominees for directors who personally own trivial amounts of stocks or securities in the corporations over which they have directorate control. Many directors own from a single share to less than 50 shares, often a total investment as small as fifteen or twenty dollars in a corporation worth anywhere from one-quarter billion to two billion dollars. These odd-lot shareholders are formulating the policies for the operation and control of our railway systems.

How can such a group of men inspire any confidence for the investor? Either they are financially too poor to purchase securities or they distrust the management of their own corporations to the extent of almost complete liquidation of their holdings. In either case the situation is not attractive to the investor who appreciates that the railroads need something better than disinterested management.

What is even more discouraging to the outsider, however, is the attitude of railroad officers in attempting to justify to the stockholders that management by those who have no personal financial interest is quite the proper procedure.

Perhaps part of the many ills, disappointing financial performance, and unjust treatment of the railroads, is basically due to disinterested management of which one-share holdings are typical.

Comments of *Railway Age* readers are solicited.

Paul D. Foote

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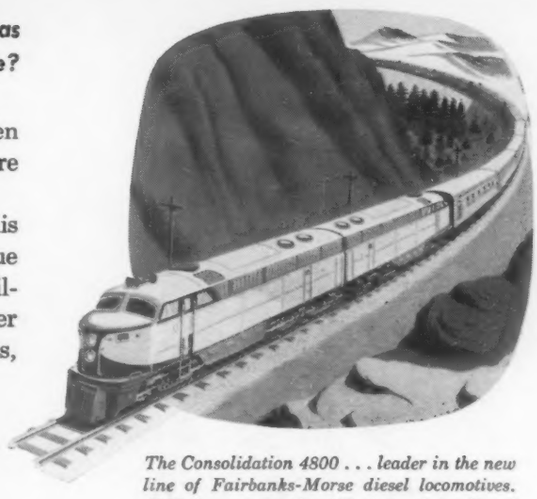
REMEMBER THIS ?

Smoke and steam in a wake of sound . . . a cheery wave from the fireman as the fast mail highballs by . . . who hasn't thrilled to this typical American scene?

. . . It's a scene, however, that is rapidly disappearing in favor of one even more dramatic, as the adoption of diesel power by railroads everywhere goes on apace.

Fairbanks-Morse diesel locomotives are ever more frequently in this picture. For, in a comparatively few years these locomotives, by virtue of their advanced design and superior performance, have invaded the railroad field to become among the leaders in the industry. Recent further design achievements assure them even greater preference. Fairbanks, Morse & Co., Chicago 5, Illinois.



The Consolidation 4800 . . . leader in the new line of Fairbanks-Morse diesel locomotives. 4800 horsepower in 113 feet—the railroad world's most compact power plant.

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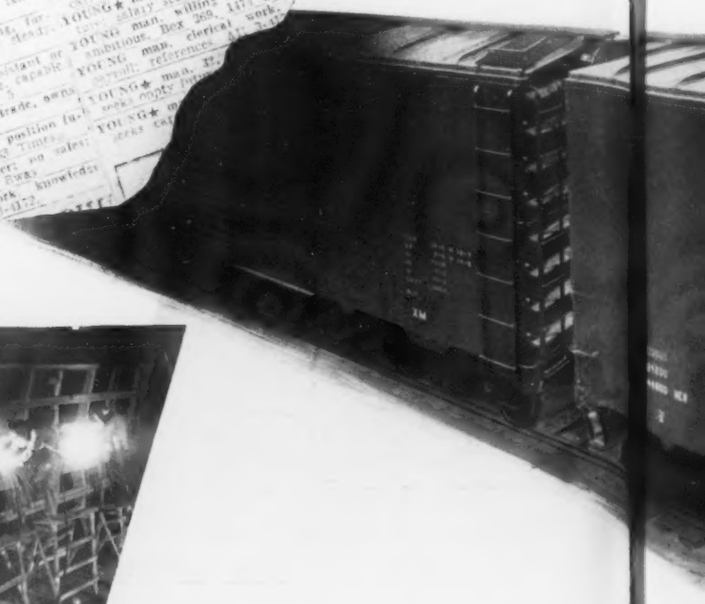
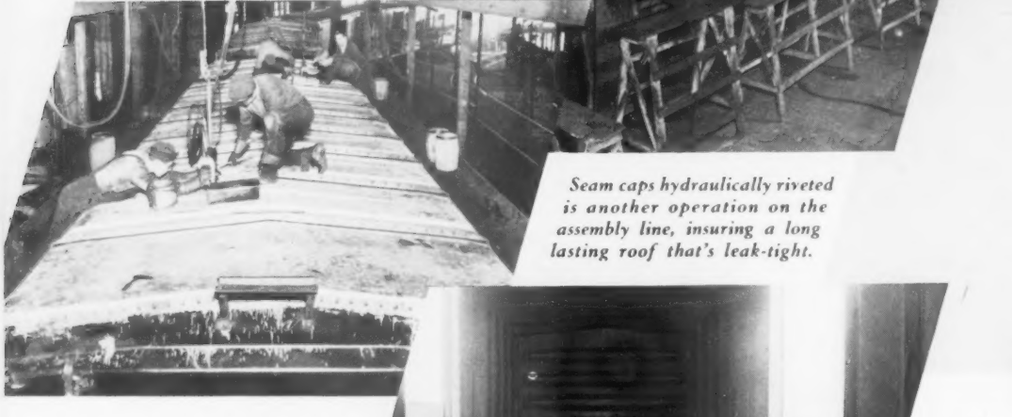
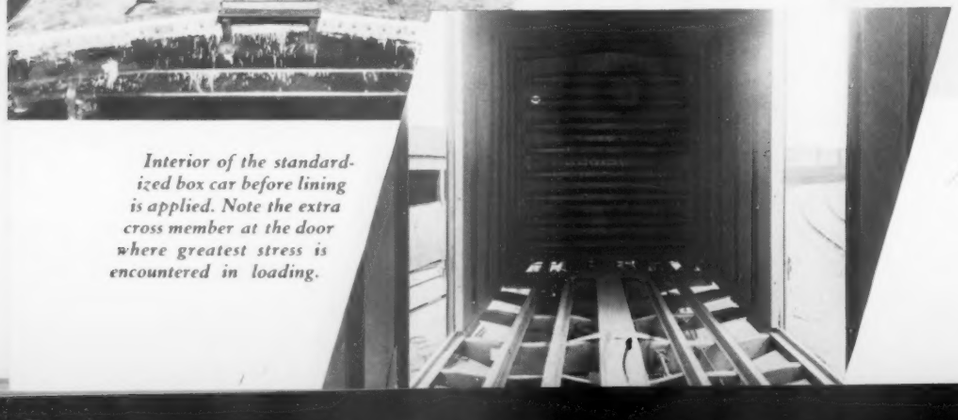


In A.C.F. assembly-line production special machinery rotates the entire underframe to desired positions for "downhand" welding.



Seam caps hydraulically riveted is another operation on the assembly line, insuring a long lasting roof that's leak-tight.



Interior of the standardized box car before lining is applied. Note the extra cross member at the door where greatest stress is encountered in loading.

a.c.f.

ONE of the most effective advertisements for a Railroad is a new freight car. Call it a traveling salesman, if you will. For wherever it goes it catches the eye. And, although you may not measure in dollars the results derived, it still sells the Railroad through better service. Ask any traffic man.

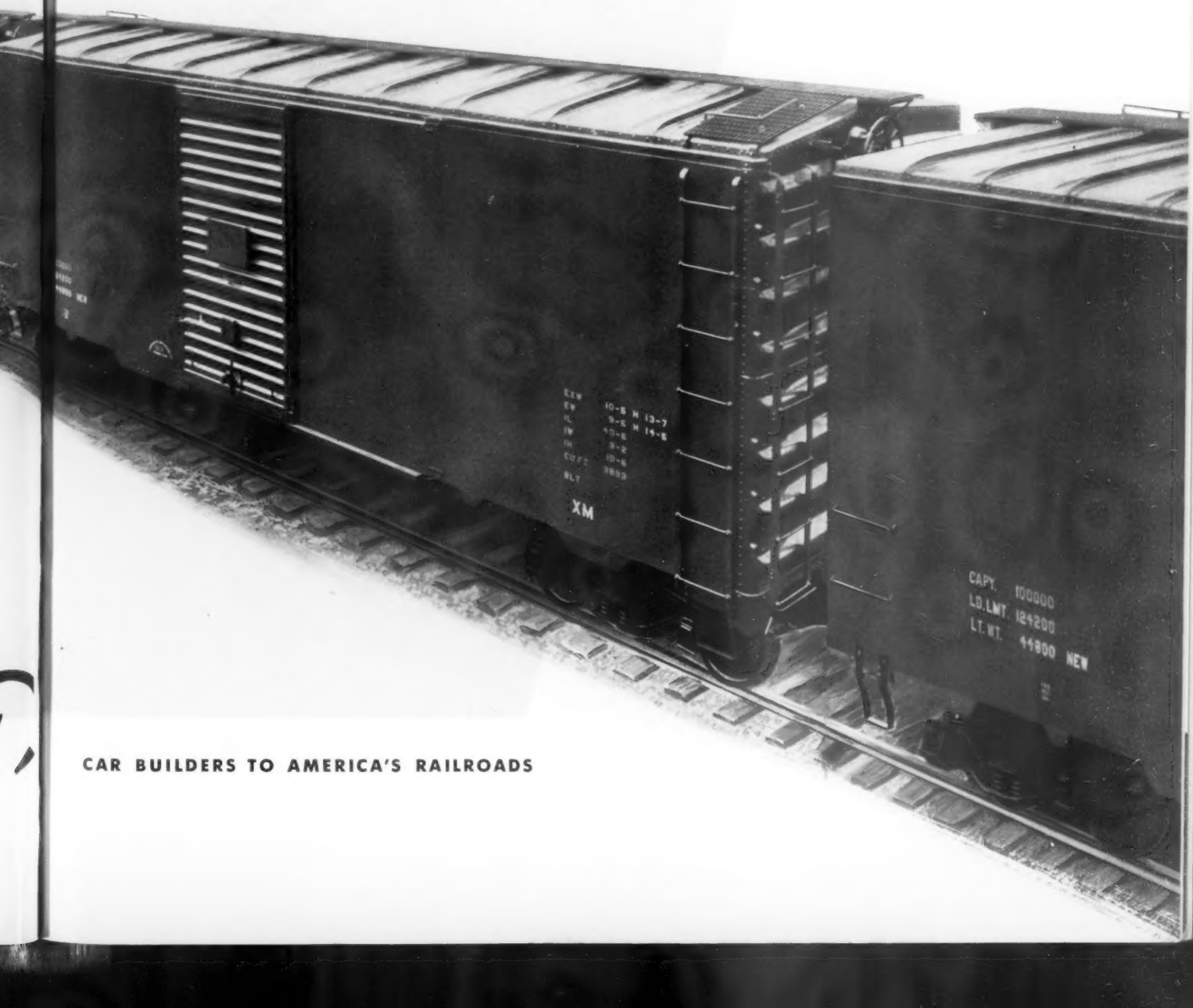
NEW CARS...LOWER COSTS

Tangible, indeed, are the lower operating costs afforded by new freight cars through heavier payloads, safer and speedier operation, easier handling with fewer damage claims and greater all-around operating efficiency.

TO BUILD...OR TO BUY

A.C.F. plant facilities, strategically located, extend to a Railroad every cost-saving advantage of new car construction *without* the need of plant investment beyond that required for normal maintenance purposes. And rest assured... A.C.F. standardized design freight cars are *'extra* built' to meet *all* operating requirements.

Ask an A.C.F. representative for the facts and figures that demonstrate how A.C.F.-built freight cars can *raise* operating efficiency and *lower* operating *costs*. American Car and Foundry Company, New York · Chicago · St. Louis · Pittsburgh · Philadelphia · Washington · Cleveland · San Francisco



CAR BUILDERS TO AMERICA'S RAILROADS

He Carried It Before And He Can Do It Again! —By Hungerford

We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

Watch for other railroad cartoons by Mr. Hungerford

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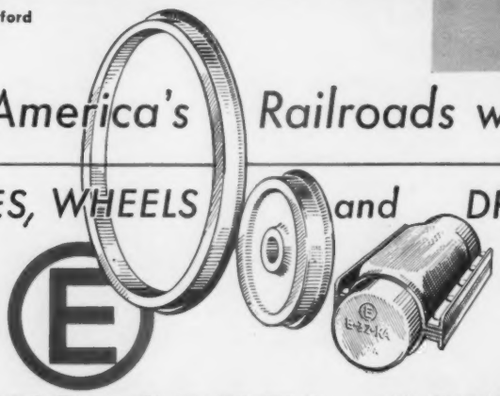
ROLLED STEEL TIRES, WHEELS and DRAFT GEARS



EDGEWATER STEEL COMPANY

P. O. BOX 478 · PITTSBURGH 30, PA.

Pullman-Standard Elects Charles W. Bryan President

Champ Carry, president since 1946, will remain active, heading board of directors

Charles W. Bryan, Jr. Champ Carry

As leasing plans add their impetus to swelling freight car orders amid overtures of a war economy, Charles W. Bryan, Jr., a former New York shipbuilder, has assumed presidency of the Pullman-Standard Car Manufacturing Company, as reported in last week's *Railway Age*. Champ Carry, who held the position of president of the firm since 1946, will remain active in its affairs as chairman of the board of directors. He is also president and chief executive officer of the parent company—Pullman, Inc.

Freight car orders have taken a noticeable upswing with the advent of car leasing arrangements such as the so-called Equitable plan. As Mr. Bryan took office in Chicago on July 20, Pullman-Standard's backlog of car orders had reached the 12,000 mark, almost an even 50 per cent of which were being purchased under a leasing plan. The company's passenger car backlog, on the other hand, has dwindled to 200 cars—barely sufficient to sustain production facilities until the end of this year.

The most serious immediate threat to the impending high volume of freight car construction is a shortage of steel. At the present time, the Michigan City, Ind., plant is operating only at about 50 per cent of total capacity and in a large measure this is due to an inadequate supply of steel. Mr. Bryan and the officers of Pullman-Standard await the outcome of the July 28 member road meeting of the Association of American Railroads at Chicago —at which the general freight car shortage will be a prime topic—with full knowledge that a lack of adequate quantities of steel may restrict volume production.

Under Mr. Bryan, research on all of Pullman-Standard's products will continue in full force. To a limited extent, the company has departed from the railway supply field in an effort to stabilize operations and avoid some of the "feast or famine" aspects of its past two decades. Initially it has produced a quantity of stainless steel facings for building construction and the company has "hung up its shingle" for similar undertakings commensurate with its productive facilities and available materials.

Although he is noted as a builder of ships, Mr. Bryan is not without previous experience in the railway field. He was born in Wilmington, Del., on January 20, 1890, and, after completing high school at New Rochelle, N. Y., he entered Washington University at St. Louis, Mo. He graduated in 1912 with a degree of Bachelor of Science and in 1922, a degree of Civil Engineer was awarded him by the same institution. Following his graduation, Mr. Bryan joined the Patrick Ryan Construction Corporation as a construction engineer on the foundations of the bridge and viaduct piers of the Hell Gate bridge of the New York Connecting Railroad. In 1914, on completion of this work, he joined the United States Realty & Improvement Co. as construction engineer and assistant superintendent on the construction of the Seventh Avenue subway in New York. One year later he entered the employ of Fraser, Brace & Co. and returned to the Hell Gate bridge project where he worked on additional phases of its construction. He also participated in caisson work by that firm at Grand Mere, Que., and the construction of a large munitions plant at Trenton, Ont.

Mr. Bryan became construction engineer for the United States Steel Corporation's newly formed Federal Shipbuilding & Dry Dock Co. in July, 1917. In this position he supervised the building of that company's large shipyard at Kearny, N. J. Following his activity in a wide variety of engineering and construction work for the firm, he was named assistant to the president in 1934 and subsequently, in 1936, vice-president in charge of sales and engineering. At the time the shipyard facilities were sold to the Navy in 1948, Mr. Bryan held the position of vice-president and general manager. During 1949, Mr. Bryan was "loaned" to the Economic Cooperation Administration and served in Italy as consultant on shipbuilding and shipping matters. An active participant in numerous engineering and technical societies, he was a pioneer in the advancement of welding for ship hull construction, having served as chairman of the American Welding Society's first committee on that subject. He is also a member of the board of direction of the American Society of Civil Engineers, and a past president of the Society of Terminal Engineers.

Mr. Carry was born at Lockport, Ill., on March 31, 1896, and received his higher education at Cornell University. He began his business career with the Haskell & Barker Car Co., at Michigan City, Ind., in 1919. In 1921 he became sales agent for the company, continuing in that capacity after the firm was acquired by the Pullman Company in 1922. When the Pullman Car & Manufacturing Corp. was formed in 1924, Mr. Carry continued in that division, becoming vice-president in charge of sales in 1929. In April, 1932, he was elected vice-president and assistant to the president of the Pullman Company. He subsequently served as vice-president in charge of operations and, on January 14, 1941, became executive vice-president of the sleeping car concern. In April, 1946, Mr. Carry resigned his post with the operating company to return to Pullman-Standard as its president.

GENERAL NEWS

Faricy Assays Rail Capacity for Defense

World War II methods, manpower, materials will do job

Outlining methods by which output of rail freight transportation was more than doubled between 1939 and 1944, and which he said could be used again in case of need, William T. Faricy, president of the Association of American Railroads, said on July 20 that railroads are in better shape now to handle defense emergency traffic than they were before World War II. To meet such emergency demands, he added, the railroads would need opportunity to secure manpower and materials, especially steel, necessary for repair and maintenance, as well as operating requirements.

In September, 1939, when war broke out in Europe [Mr. Faricy said] the railroads had 1,737,000 freight cars. In that year, they produced 336 billion ton-miles of freight service. At the end of 1941, the time of Pearl Harbor, they had 1,784,000 freight cars, or 2.7 per cent more than in 1939, but in the year 1941 they produced 478 billion ton-miles of service, 43 per cent more than in 1939. At the end of 1944, when the war load reached its peak, the railroads had 1,851,000 freight cars, or 6.6 per cent more than when war began, with which they turned out 741 billion ton-miles of service a year, or more than double the output of 1939.

On July 1, 1950, the railroads had 1,807,000 freight cars, or 4 per cent more than in 1939, with an aggregate carrying capacity nearly 11 per cent above that of 1939. More than 600,000 of them are new cars, bigger and better than the cars which they replaced. The railroads have more and better cars now than they had when World War II began.

In other essential respects, railroads have improved even more. They have 12,000 Diesel-electric locomotive units which they did not have in September, 1939, and 1,800 new and better steam locomotives. They have 10,000 miles of new automatic signaling, and more than 9,000 miles of new centralized traffic control which they did not have then. They have improved tracks, terminals, shops, all parts of their plant and equipment, at an expenditure, since 1939, of more than seven billion dollars.

The great increase in transportation output during World War II was largely due to the changes in methods of utilization of railroads brought about by mobilization and war needs.

During the war cars were not loaded according to current commercial practices or tariff minima but to maximum capacity. This was due partly to heavy loading orders of government agencies, partly to organized cooperative effort of shippers and receivers of freight. Cars were loaded, unloaded and handled more promptly. This was due partly to the cooperative efforts of the Shippers Advisory Boards and their Car Efficiency Committees; partly to the stimulus of penalty demurrage rates; partly to the fact that both industry and the railroads worked six-day weeks, and even seven-day weeks.

The measures which stepped up the whole tempo of rail transportation are well known and, if need should arise, can be applied again with government assistance and shipper cooperation.

Mr. Faricy pointed out that "there is a better understanding on the part of all concerned that transportation, including rail transportation, is just as much a part of any national effort as is the manufacture of material and equipment for the armed forces." There is, he added "a general realization of the truth of the statement of Colonel J. Monroe Johnson, chairman of the Interstate Commerce Commission, that neither the nation nor the armed forces can have any more of anything than can be hauled. In any program of allocation of materials, it is essential that railroads receive greater and more prompt recognition than they did prior to 1943, and that they be allowed access to the manpower and materials necessary both for their operations and for repair and maintenance."

POLICE APPLICATIONS of "black light" were demonstrated to the Pennsylvania's police officers at a recent two-day "police school" conducted by the railroad in cooperation with federal, state and city law enforcement representatives. Held in Chicago on June 21 and 22, the training school dealt with both legal and physical aspects of law enforcement, with respect to railroad police work. The "faculty" of the school included, from left to right: Lawrence J. Miller, first assistant United States district attorney, Chicago; Oscar Lindstrand, assistant general counsel for the Pennsylvania, Chicago; John W. Shumaker, superintendent of police for the railroad at Chicago—shown demonstrating the "black light" equipment; Raymond J. Driscoll, special agent, Federal Bureau of Investigation; John C. Prendergast, commissioner of police, City of Chicago, and James P. Newell, general manager, Western region of the P.R.R., Chicago

Senate Group Learns About Rail Labor Act

Myers committee hears Loomis; also views of water carriers

Daniel P. Loomis, chairman of the Association of Western Railways, this week laid before the Senate's subcommittee on domestic land and water transportation the railroad industry's proposals for amending the Railway Labor Act to make strikes and lockouts unlawful and to "completely" rewrite provisions relating to the National Railroad Adjustment Board. He supported his recommendations with a statement which embodied a highlight review of railroad labor controversies, and legislation enacted to deal

with them, during the period from 1888 to the present time, when the situation is "the worst in history."

In addition to his chairmanship of the A.W.R., Mr. Loomis is also chairman of the Western Carriers' Conference Committee, which, with like committees from other regions, is representing railroad management in current wage proceedings. He made his presentation at the July 25 session of public hearings which the subcommittee, headed by Senator Myers, Democrat of Pennsylvania, is holding in connection with studies it is making pursuant to Senate Resolution 50. At the same session, and at its previous hearing on July 20, the subcommittee heard representatives of the water carrier industry, including Chester C. Thompson, president of American Waterways Operators, Inc.

A Senate bill proposing to enact those Loomis recommendations which would bar strikes and lockouts in the railroad industry was recently pigeonholed by the Senate committee on labor and public welfare, which decided not to report the measure to the Senate. The pigeonholed bill is S.3463, sponsored by Senator Donnell, Republican of Missouri. (See *Railway Age* of July 22, page 46.)

As stated by Mr. Loomis, it is the railroads' position that strikes in their industry should be prohibited by law "because a railroad strike can so quickly and thoroughly paralyze the nation, bringing about disaster to its economy and working havoc in its defense program." Meanwhile, he said that if there were any method of preventing railroad strikes other than making the findings of Presidential boards final, the railroads would accept it.

Sees No "Other Solution"

"The railroad industry," Mr. Loomis continued, "approaches the proposition of compulsory arbitration with considerable reluctance, but based upon experience of the last 10 years, we do not see any other solution to the problem."

He went on to express his view that compulsory arbitration of railroad labor disputes would result in more agreements being made through collective bargaining, because under the present system, he said, it has been the policy of at least some of the railroad labor organizations to go through all processes of the Railway Labor Act to see what they could get. Then after a recommendation has been made by a Presidential board, he added, they reject it in the hope that through political and economic pressure they will be able to get even more than has been recommended.

"If both sides fully realized that they ran the risk of losing something through procedures that would be final and binding [Mr. Loomis explained] there would be more real bargaining across the table in an attempt to settle these controversies, rather than allowing them to run the full gamut of the procedures of the Railway Labor Act and then put pressure on the country and the government to try and get more."

On the basis of his review of the history of railroad labor relations, Mr. Loomis argued that "it would seem very preferable to apply the judicial process to railway labor disputes and have decisions made which are based upon an adequate record, substantial evidence and a full opportunity to all parties to present all the evidence and argument which they desire."

Would Change Adjustment Set-Up

Coming to his consideration of cases within the jurisdiction of the Adjustment Board, Mr. Loomis asserted that there was no justification for strikes arising out of such cases, which involve interpretation of contracts or grievances growing out of them. Such disputes, he pointed out, do not involve changes in wages, rules or working conditions, and there are several methods available for the interpretation of contracts.

He went on to say also that while the Railway Labor Act in theory provides for court review of Adjustment-Board awards, the policy of unions representing operating employees has been to threaten a strike unless the carrier complies with an award. Thus, Mr. Loomis added, as a practical matter, no court review has been afforded.

His proposed rewriting of the act's Adjustment-Board provisions called first for abolition of the present board and creation of a new tripartite board, consisting of representatives of the carriers, the employees, and "neutral public members to be appointed by the President with the advice and consent of the Senate."

Other phases of the proposed revision would establish a time limit on filing of claims growing out of grievances; require adoption of uniform procedures by various divisions of the board; and assure that court review of awards would actually be available to the parties.

Mr. Loomis also recommended that the act be amended to remove supervisory employees from its coverage; to add a declaration of public policy against "feather-bedding," i.e., a call for "avoidance of wasteful, duplicating and uneconomic practices"; and to provide that National Mediation Board certifications of unions to represent employees should remain in effect for not less than three years from the date of such certifications.

President Thompson of American Waterways Operators said that railroad presentations before the subcommittee had made it "clear once more" that the railroads "really want a transportation monopoly." It was Mr. Thompson's view, however, that "the American people never again will tolerate a monopoly of any one form of transport."

He went on to report on the growth of domestic water transportation, attributing it to "demands of shippers and consumers," who "know and appreciate that water transportation is efficient, reliable and low-cost, and that its use wherever possible means lower manufacturing and distribution costs." Even though the water carriers do not get some of the business, Mr. Thompson said their presence has the effect of reducing railroad rates. "The influence of low water freight rates on all other freight rates is readily acknowledged by experienced traffic men," he added.

Later on, Mr. Thompson said that "many elements" in the water transportation industry are "deeply concerned" about publication by the railroads of "many unwarranted selective rate reductions which, if continued at the present tempo, could well destroy private enterprise in all transportation in this country." Practically all such reductions are made by the railroads with benefit of relief from the long-and-short-haul clause of the Interstate Commerce Act's fourth section, Mr. Thompson added. And he told the subcommittee that Congress should never go along with railroad proposals for repeal of the fourth section—"if anything, it should strengthen it."

Later on the A.W.O. president said that the railroads, in their various marine operations, "are the largest single users of the navigable rivers, harbors and waterways." And he chided the railroads for wanting "something done" about water transportation on inland waterways, but not that on seacoast harbors, the Great Lakes and connecting waterways "used so extensively by . . . the railroads."

Because of the diversity of interests of the water carriers in his association, Mr. Thompson had no recommendations as to changes in the regulatory laws. Among representatives of various water carrier interests who followed him were those who opposed, and those who favored, an extension of regulation to cover transportation of bulk commodities now exempt.

Prudential Will Enter Car-Financing Field

Announces tie-up with General American-Evans Company

The Prudential Insurance Company of America will finance construction and leasing to railroads of the new "GAEX-DF" box car developed by the General American-Evans Company, a subsidiary of the General American Transportation Corporation. This was announced by Prudential's president, Carroll M. Shanks, at a July 20 press conference in Washington, D. C.,

FIRST OF ITS KIND—This 16,000-gal. Diesel fuel oil tank car, the first tank car built for the Canadian Pacific since 1922, is 53 ft. 11¼ in. long and holds 6,000 gals. more than the next largest one in C.P. service. It will be used primarily to transport fuel oil to points on the road's Schreiber division around the north shore of Lake Michigan, which will be completely Dieselized for freight service by early fall. The car is the first on an order of 20 being built by the Canadian Car & Foundry Co.

where one of the new cars was exhibited on that day.

In making the announcement, Mr. Shanks said there was sufficient traffic to keep 100,000 of the "damage-free" cars in profitable operation. Since it costs about $10,000 to build and put each car in service, the installation of 100,000 would involve a billion dollars of financing. Prudential would supply 80 per cent, or $800 million, while General American-Evans would supply the remaining 20 per cent, or $200 million.

Mr. Shanks explained that the financing would be under equipment-trust arrangements of the usual type. Prudential would purchase equipment trust certificates issued by General American-Evans and guaranteed by General American Transportation. He added that the certificates would perhaps have 20-yr. terms, i.e., mature in annual installments over 20-yr. periods.

Mr. Selig's Remarks

Lester N. Selig, chairman of the board of General American Transportation, explained further that the arrangement under which railroads would use the cars would be a lease—not a purchase plan. Mr. Selig called the new car a weapon with which the railroads could reduce loss and damage and provide service to meet truck competition. He noted that nine roads have already made arrangements to lease the cars—Boston & Maine; Chesapeake & Ohio; Chicago & North Western; Chicago, Burlington & Quincy; Gulf, Mobile & Ohio; New York, Chicago & St. Louis; Pennsylvania; Southern Pacific, and Wabash.

Meanwhile, Mr. Shanks had said that Prudential got interested in the matter as a result of studies made by Fairman R. Dick and Arthur W. Page. Mr. Page is a Prudential director, while Mr. Dick, a member of the investment firm of Dick & Merle-Smith, is a director of the B.&M. As they analyzed the railroad problem, Mr. Shanks said, "one answer seemed to lie in improved freight cars that would carry heavier payloads, that could be operated more efficiently, and that could be put into service without investment of capital on the part of the roads." (See *Railway Age* of May 27, page 51.)

Mr. Shanks went on to refer to estimates indicating that "in a year's time, one of these cars, on lease to the roads could produce at least $2,000 more profit than that earned by a standard railroad-owned box car." He pointed out that the cars "are intended primarily to be used in transporting certain selected commodities where present damage costs are high."

The railroads, he continued, "now carry approximately 100 billion ton-miles of this freight." And, he added, "it has been estimated that if this freight were carried in the new type cars. . . the roads might take as much as $260 million per year in additional profit without capital investment of any sort." Mr. Dick, who presided at the press conference, which was a luncheon session at Washington's Mayflower Hotel, suggested that the potential savings were of a kind with those realized from Dieselization.

Advantages of Car

The savings are expected to result from heavy loading and reduction of loss and damage to freight. Among other features of the car are its loading device which "virtually eliminates damage and increases the load 30 per cent"; its balanced suspension trucks which allow greater speed and "reduce lateral and vertical service shocks"; and its cushioned underframe which "reduces end shock." About 400 of the cars are under construction and a few are already in service, Mr. Shanks said. (For a complete description of the car, see *Railway Age* of April 22, page 43, and May 13, page 48.)

Senator Myers, Democrat of Pennsylvania, who is chairman of the Senate's subcommittee on domestic land and water transportation, was also scheduled to speak at the luncheon. He was unable to attend, however, and the address he nad prepared was read by the subcommittee's staff director, E. R. Jelsma. The address reviewed evidence gathered by the subcommittee on the freight-car situation, which the senator called "an emergency." He said he was not advocating the General American-Prudential plan, or any other plan, for meeting the situation; but he hopes "that plans will be developed for filling our needs which will not require government assistance."

$5 Billion Tax Increase Recommended by Truman

Increases in corporate and individual income taxes and other adjustments to yield a total of $5 billion a year were recommended by President Truman in his Mid-Year Economic Report which went to Congress on July 26. The President's tax program had been announced the previous day, when he sent a letter outlining it to Senator George, Democrat of Georgia, who is chairman of the Senate committee on finance.

That committee has before it the House-approved excise-tax-reduction bill, H. R. 8920, which it set aside recently after being advised by Secretary of Commerce Snyder that "it would not be prudent" to proceed with excise tax reductions because of developments in Korea. It is the President's present recommendation that this House-approved bill be revised to embody his revenue-raising program, and that "immediate action" be taken to enact the program.

The revision suggested by the President would eliminate the proposed reductions in the transportation taxes and other excise levies, but would retain the so-called "loophole-closing" provisions of the present bill. As to corporate income taxes, the President recommended that they be raised "to provide a rate of 25 per cent on the first $25,000 of income and 45 per cent on the balance, beginning with 1950 incomes."

As to individual income taxes, he said the rates "should be increased to the 'tentative' levels adopted in 1945, by removing the percentage reductions from those levels adopted in 1945 and 1948." This, the President added, "should be effective beginning with one-quarter of 1950 incomes, and would be accompanied by an increase in the witholding rate from 15 to 18 per cent, beginning with the last quarter of 1950."

The President called his recommendations an "interim" program; the

"immediate enactment" of which is "vital." He added that this "will not be enough"; that "it will be necessary, when the necessary studies can be completed . . . , to raise still additional revenues to avoid a deficit during times when economic policy and budgetary policy call for a balanced budget or surplus."

Other recommendations of the economic report were like those made by the President in his July 19 message on the Korean war situation. Thus they called again for legislation authorizing the government to establish priorities and allocate materials; to limit the use of materials for non-essential purposes; to prevent inventory hoarding; and to requisition supplies. (See *Railway Age* of July 22, page 44.)

In another part of the economic message, President Truman called upon labor to join with management "in the further consolidation of industrial peace." The President added that "work stoppages in vital industries are something we simply cannot afford under current conditions."

Tidewater Coal Demurrage Pact Approved by I.C.C.

Division 2 of the Interstate Commerce Commission has approved the Bulwinkle-Act agreement entered by the railroads serving North Atlantic ports for the purpose of maintaining procedures for joint consideration, initiation and establishment of tidewater demurrage and detention charges on coal and coal products moving through such ports. The proceeding was docketed as Section 5a Application No. 13.

Fourteen railroads are parties to the agreement. The principal tidewater facilities involved are those at Hampton Roads, Va., Baltimore, Md., Philadelphia, Pa., and New York. In acting favorably on the application the commission rejected contentions of the Department of Justice, which was in its usual Bulwinkle-case role of protestant.

Gass Reports Improved Bad-Order Car Situation

The "substantial reduction" made during June in the number of freight cars held for repairs has placed the bad order percentage at its lowest point since July 1, 1949, Chairman Arthur H. Gass of the Car Service Division, Association of American Railroads, said in his latest review of the "National Transportation Situation."

Reflecting the results of large-scale repair programs, approximately 65,000 cars received heavy repairs during May and June, Mr. Gass reported. He said that "practically all railroads" have big repair programs under way, and the reduction in bad order cars since May 1 has more than offset the 8,717 car loss in ownership since that date.

Mr. Gass said that orders placed for new freight cars in May and June amounted to 13,900, bringing the total for the first half of the year to 38,549. He went on to say, however, that as of July 1 there were 40,122 cars on order and since some of them will not be ready for service before early next year the total ownership in cars will be less at the end of this year than it is at the present time.

Discussing the current car situation, the C.S.D. chairman indicated the supply of box cars is "tight throughout the country." The gondola supply is "very tight" with some "rather severe shortages" being reported recently from various sections of the country. He classed the demand for hoppers as "moderately heavy," and said there have been "some serious shortages" of flats in the midwest.

The peak of the Southwestern winter wheat movement has been passed, Mr. Gass said in commenting on the box car situation. The Northwestern harvest will begin late this month, however, and steps have been taken to turn the flow of box cars to grain roads in that area.

Mr. Gass noted that two Special Car Orders have been issued by the C.S.D., effective July 15, requiring Eastern, Pocahontas and certain Southwestern roads to return empty to the owners box cars belonging to the major Northwestern grain loading lines. He also mentioned Special Car Order 59 which was issued to expedite the return of Canadian box cars to their owners. The latter order became effective July 5.

Meanwhile, in his discussion of the open top car situation, Mr. Gass said both bituminous coal and iron ore stocks on hand June 1 were below those of the same date last year. He added, however, that bituminous production in 1950 "may be expected to approximate 485 million tons as compared with 435 million tons in 1949," while the iron ore deficit should be reduced by the continuing lake movements and a "substantial all rail movement" which began July 10. This rail movement of ore will continue until cold weather, Mr. Gass said.

Although lake navigation was delayed this year because of heavy ice in Lake Superior, the C.S.D. chairman said that it "now appears possible" that the original program calling for the lake movement of 50 million tons of coal may be realized by December 1. Because of the late opening of navigation the program had been revised downward to 45 million tons.

The average turn-around time of freight cars in June, as reported by Mr. Gass, was 14.6 days. The comparable figure for June, 1949, was 16.12 days. Cars detained beyond the 48 hours free time averaged 21.8 per cent of the total placed in June. This compared with 19.97 per cent in May and 19.45 per cent in June, 1949.

Sawyer Notes Growth Of Transport Capacity

"Our transportation system has a far greater capacity than prior to World War II," Secretary of Commerce Sawyer told the Senate and House committees on banking and currency this week. The secretary appeared before each committee on July 25 to support proposed legislation to give President Truman authority to establish priorities and allocate scarce materials, as recommended in the President's July 19 message on the Korean war situation.

"Locomotives and freight car capacity," Secretary Sawyer said, "exceed prewar levels. Private and commercial vehicle registrations in 1949 were 36 per cent greater than the 1939-41 aver-

C. H. MOTTIER, vice-president and chief engineer of the Illinois Central, points out for members of the road's board of directors and the construction superintendent of the American Bridge Company, the modernization work under way on the road's bridge over the Ohio river at Cairo, Ill. New spans for the bridge will be fabricated and erected by the bridge company alongside the present spans and then placed on the old piers. As each span is completed, the corresponding span of the old bridge will be cut free, and the new section rolled into place

age. In the 1939-41 period, American flag vessels in the overseas trade totaled 563 with a gross tonnage of 3,400,000. We now have, including reserve fleets, more than five times as many ships with a gross tonnage proportionately greater. Our oil gathering trunk pipe lines are 22 per cent greater than prewar."

More Radio on Erie

The Erie has announced that its main-line radiotelephone system is now in service on 884 mi. between New York and Marion, Ohio, approximately 85 per cent of the road's route from New York to Chicago. A total of 119 Diesel-electric locomotives, 42 cabooses and 50 wayside offices are equipped, and the system provides for conversation between (1) cab and caboose crews; (2) crews of other trains within range; (3) moving trains and wayside stations; and (4) adjacent wayside stations.

"Two years of actual radio operation on three divisions and several years of experimentation have convinced the Erie that radio is an integral and effective factor in safe, efficient and dependable railroad transportation," according to R. C. Randall, vice-president of operation and maintenance. A principal advantage has been reduction of operating hazards and delays in movement of freight trains and damage to equipment. A general article on the first part of the installation between Marion and Salamanca, N. Y., was published in the September 11, 1948. *Railway Age*, and a detailed article was published in the December, 1948, *Railway Signaling*.

In addition to the new main-line radio communication facilities, the Erie has announced also that a radio tower, formerly used by a commercial broadcasting station, has been acquired as the first step in extending the system into the Buffalo, N. Y., area. The tower, according to F. H. Menagh, superintendent of communications, will enable the railroad to install an antenna 410 ft. above the street, thus providing radio coverage in the Buffalo terminal area, Suspension Bridge, Niagara Falls, and considerable territory on the Buffalo and Southwestern divisions. Radio control equipment is to be installed immediately in the dispatcher's office at Buffalo and in "1Q" tower, located at the beginning of the Niagara Falls branch in East Buffalo. These installations are to be followed by others at five control points and on 27 yard and road-type Diesel locomotives operating in the Buffalo area.

Train-, Yard-Service Wage Cases Still in Mediation

The National Mediation Board continued this week on its undertaking to bring about a settlement of the wage and rules disputes involving train and yard-service employees. The board was still holding conferences with the parties in Washington, D.C., where the mediation proceedings were shifted on July 17 after a series of sessions at Chicago.

When this issue went to press, there was no indication of progress toward a settlement. A member of N.M.B. said the proceedings were still "rocking along," while other informed sources described the meetings as "still pretty much exploratory." The present situation is the result of the refusal of the involved unions to accept recommendations of the emergency board which reported on their demands (see *Railway Age* of June 24, page 84). The unions are the Brotherhood of Railroad Trainmen, Order of Railway Conductors, Railroad Yardmasters of America, and Switchmen's Union of North America.

Erie locomotive and caboose crews of a passing freight train communicate with way station personnel by means of radiotelephone system. Shown above, the Port Jervis, N. Y., station is a typical control point

Fleming Takes Oath Of Office

Major General Philip B. Fleming took his oath of office as undersecretary of commerce for transportation on July 24. President Truman's appointment of General Fleming to this newly created position had been confirmed by the Senate on July 21.

The position was established by the President as part of a government reorganization plan which also abolished the United States Maritime Commission, dividing its functions between two new agencies of the Department of Commerce—a Federal Maritime Board and a Maritime Administration. General Fleming had been chairman of the Maritime Commission.

As the President explained in announcing the reorganization plan, the new undersecretary will assist the secretary of commerce "in the direction and coordination of the transportation activities now centered in the department." In addition to the new merchant-marine set-up, such activities include those of the Civil Aeronautics Administration, the Bureau of Public Roads, and the Inland Waterways Corporation, operator of the Federal Barge Lines.

It is the President's purpose "to look to the secretary of commerce for leadership with respect to transportation problems and for development of overall transportation policies within the executive branch," Mr. Truman also said in announcing the plan. After General Fleming took his oath of office, the Commerce Department issued a statement saying that the new undersecretary "will serve as the principal deputy to the secretary on all matters concerning transportation within the department and will exercise general supervision over all such activities."

Another Commodities Clause Proposed by Celler

Representative Celler, Democrat of New York, has introduced a bill to add to the Clayton Act a commodities clause tighter than the one now embodied in section 1 (8) of the Interstate Commerce Act. The bill, H.R. 9231, was referred to the House committee on judiciary of which Mr. Celler is chairman.

Generally, the bill would extend the clause's prohibition against a railroad transporting products in which it has an interest to bar the transportation of commodities manufactured, mined or produced by persons "controlling, controlled by, or under common control of such carrier." Like the present

I.C. Act clause, the bill would exempt the transportation of timber and manufactured products thereof.

A statement issued by Mr. Celler when he introduced the bill indicated that he is interested in ending ownership of railroads by industries. The House judiciary committee's subcommittee on study of monopoly power, which Mr. Celler also heads, considered the commodity clause at a series of hearings held in May. At those hearings, Interstate Commerce Commissioner Aitchison advised the subcommittee that any legislation designed to tighten the commodities clause should include a provision whereby the commission would have authority to grant relief "in proper cases." (See *Railway Age* of May 13, page 60.) The Celler bill contains no such provision.

Waybill Study

Another waybill study has been issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. It is Statement No. 5028, Distribution of Freight Traffic and Revenue Averages by Commodity Classes and Rate Territories—Terminations in 1948.

New Haven to Drop L.C.L. Service at Selected Points

The New York, New Haven & Hartford is planning to discontinue less-than-carload freight service at a number of stations where volume of business is too small to justify its maintenance. When the plan is carried out, l.c.l. business will be concentrated at strategically located larger stations. The plan, a result of studies conducted by the New Haven of l.c.l. freight at about 200 smaller stations throughout its system, is expected to reduce losses previously sustained from handling that class of traffic.

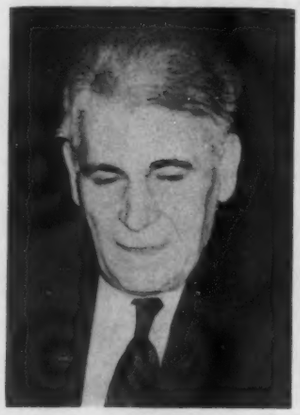
James P. Shields Elected Grand Chief Engineer

James P. Shields, whose election at the recent triennial convention of the Brotherhood of Locomotive Engineers to succeed Alvanley Johnston as grand chief engineer was reported on page 54 of last week's *Railway Age*, was born in Neoga, Ill., 61 years ago and began his career as a fireman on the Michigan Central in 1906. After working for several other railroads he joined the Union Pacific at Rawlins, Wyo., in 1910. Six years later he was promoted to engineman and became a member of the B. of L.E. He became a local chairman in 1926, vice-general chairman for the U.P.'s eastern lines in 1931 and general chairman one year later. In 1939 Mr. Shields was appointed a temporary assistant grand chief, to which office he was elected in 1942. He advanced to first assistant grand chief, the post he held until his recent election, in 1946, after the death of the late R. E. Edrington.

Mr. Johnston, who did not seek re-election as grand chief engineer because, as he reportedly insisted, "it's time for me to take a rest and enjoy life," was born to American parents

Alvanley Johnston

in Seeley's Bay, Ont., on May 12, 1875. After attending public schools there and the Brockville (Ont.) Business College, he entered railroad service on September 8, 1892, with the Great Northern. He worked successively as call boy, fireman and engineman until September, 1909. From then until 1918 he was general chairman on the G.N. for the engineers' brotherhood. In 1918 he was elected assistant grand chief engineer, which position he held until his election to succeed the late Warren Stone as grand chief engineer in 1925.



James P. Shields

As also reported in last week's *Railway Age*, Guy L. Brown, a B. of L.E. assistant grand chief engineer for the past year, was elected to succeed Mr. Shields as first assistant grand chief engineer. In a contest for election as assistant grand chief engineer, J. W. Turner, of Portsmouth, Va., a grand lodge representative for many years, defeated George W. Laughlin, who had been an assistant grand chief engineer since 1924. Among other business, delegates to the convention voted overall pensions, including Railroad Retirement Act benefits, of $300 a month for retired B. of L.E. officers.

Freight Car Loadings

Loadings of revenue freight in the week ended July 22 totaled 829,884 cars, the Association of American Railroads announced on July 27. This was an increase of 40,616 cars, or 5.1 per cent, above the previous week, an increase of 111,368 cars, or 15.5 per cent, above the corresponding week last year, and a drop of 52,245 cars, or 5.9 per cent, below the equivalent 1948 week.

Loadings of revenue freight for the week ended July 15 totaled 789,268 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, July 15

	1950	1949	1948
Eastern	135,702	128,363	151,434
Allegheny	157,233	138,974	181,742
Pocahontas	56 491	42,099	75,231
Southern	117,030	102,815	131,460
Northwestern	138,584	134,564	138,354
Central Western	121,212	120,636	142,032
Southwestern	63,016	56,732	71,827
Total Western Districts	322,812	311,932	352,213
Total All Roads	789,268	724,183	892,080
Commodities:			
Grain and grain products	58,823	79,758	66,941
Livestock	6,938	8,907	10,218
Coal	128,289	100,202	195,811
Coke	14,376	8,466	12,966
Forest products	46,291	35,809	51,851
Ore	89,076	83,896	83,822
Merchandise l.c.l.	76,669	84,403	97,457
Miscellaneous	368 806	322,742	373,014
July 15	789,268	724,183	892,080
July 8	553,876	595,321	755,100
July 1	783,357	644,182	757,278
June 24	810,152	802,941	888,368
June 17	805,680	649,351	906,631
Cumulative total 28 weeks	19,230,407	20,056,586	22,474,690

In Canada.—Carloadings for the week ended July 15 totaled 78,201 cars, compared with 78,893 cars for the previous week, and 73,210 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
July 15, 1950	78,201	28,966
July 16, 1949	73,210	28,437
Cumulative totals for Canada:		
July 15, 1950	2,024,090	856,862
July 16, 1949	2,021,853	872,499

N.S.R.B. Has Johnson Plan For War Transport Set-Up

A comprehensive plan for an emergency transportation agency similar to the former Office of Defense Transportation is on file with the National Security Resources Board and can be placed in operation should the need arise. This was revealed last week by Interstate Commerce Commission Chairman J. Monroe Johnson, who prepared the plan and submitted it to the board "some six or eight months ago."

Mentioning the plan during an interview with the press, Commissioner

Johnson would not comment on its details, but indicated that it was based on his experience as head of the O.D.T. during the latter part of World War II. He added that he had made no transportation recommendations to the board in connection with the Korean war.

Asked about the possibility of the I.C.C. instituting a "heavy loading" rule as a result of increased traffic in the Korean emergency, Commissioner Johnson said there had been no discussion of such an order. He said that such an order would be "impracticable" because the commission does not have the staff to do such a job. It would require a sizeable force of field men to supervise heavy loading, he pointed out.

The I.C.C. chairman also discussed the freight car situation, and among other things termed the bad order situation as "scandalous, literally scandalous." He said the car shortage had been serious before the Korean emergency and continues serious.

Would Reject Truckers Bulwinkle-Act Pact

Examiner Frank E. Mullen has recommended that the Interstate Commerce Commission disapprove a Bulwinkle-Act agreement proposed by a group of western motor carriers which are members of the Interstate Freight Carriers' Conference. The proceeding is docketed as Section 5a Application No. 12.

The proposed agreement would set up procedures for joint consideration, initiation, or establishment of rates, rules, and practices applicable to transportation of property between points in California, Nevada, Utah, Arizona, New Mexico, and portions of Colorado and Texas. The examiner based his adverse recommendation on findings that the conference's by-laws failed in several respects to meet Bulwinkle-Act requirements.

Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 128 reports (Form IBS) representing 132 steam railways

(SWITCHING AND TERMINAL COMPANIES NOT INCLUDED)

Income Items	United States For month of March 1950	For month of March 1949	For the three months of 1950	For the three months of 1949
1. Net railway operating income	$75,706,315	$66,102,660	$123,779,467	$131,386,148
2. Other income	16,459,294	17,350,913	50,461,921	50,418,063
3. Total income	92,165,609	83,453,573	174,241,388	181,804,211
4. Miscellaneous deductions from income	4,616,875	2,847,313	10,906,777	9,835,707
5. Income available for fixed charges	87,548,734	80,606,260	163,334,611	171,968,504
6. Fixed charges:				
6–01. Rent for leased roads and equipment	9,592,299	10,525,183	26,897,864	27,370,926
6–02. Interest deductions[1]	25,002,884	24,617,410	74,889,507	73,761,651
Other deductions	201,341	205,261	609,216	552,172
Total fixed charges	34,796,524	35,347,854	102,396,587	101,684,749
7. Income after fixed charges	52,752,210	45,258,406	60,938,024	70,283,755
8. Other deductions	3,315,608	3,100,845	9,707,938	9,314,960
9. Net income	49,436,602	42,157,561	51,230,086	60,968,795
10. Depreciation (Way and structures and Equipment)	34,920,312	33,111,890	104,553,289	98,548,510
11. Amortization of defense projects	1,371,026	1,357,574	4,129,110	4,106,267
12. Federal income taxes	31,548,927	23,897,270	57,811,069	59,471,053
13. Dividend appropriations:				
13–01. On common stock	11,595,049	23,214,687	38,082,891	46,372,242
13–02. On preferred stock	4,945,685	4,133,401	23,300,574	22,597,962
Ratio of income to fixed charges (Item 5 ÷ 6—04)	2.52	2.28	1.60	1.69

Selected Expenditures and Asset Items	United States Balance at end of March 1950	1949
17. Expenditures (gross) for additions and betterments—Road	$53,424,813	$71,566,497
18. Expenditures (gross) for additions and betterments—Equipment	159,234,045	271,689,350
19. Investments in stock, bonds, etc., other than those of affiliated companies (Total, Account 707)	486,019,318	519,401,120
20. Other unadjusted debits	105,992,313	133,334,408
21. Cash	827,180,761	768,277,205
22. Temporary cash investments	736,199,190	908,172,865
23. Special deposits	111,178,847	121,985,904
24. Loans and bills receivable	1,099,703	744,398
25. Traffic and car-service balances—Dr.	58,221,835	53,608,270
26. Net balance receivable from agents and conductors	123,439,281	113,404,832
27. Miscellaneous accounts receivable	259,934,647	313,311,380
28. Materials and supplies	725,896,274	890,175,018
29. Interest and dividends receivable	15,644,732	13,305,510
30. Accrued accounts receivable	161,485,629	140,751,262
31. Other current assets	31,958,823	39,451,601
32. Total current assets (items 21 to 31)	3,052,239,722	3,363,188,245
Selected Liability Items		
40. Funded debt maturing within 6 months[2]	$121,599,327	$163,506,128
41. Loans and bills payable[3]	9,710,706	3,000,000
42. Traffic and car-service balances—Cr.	80,368,586	73,748,703
43. Audited accounts and wages payable	430,890,859	473,521,902
44. Miscellaneous accounts payable	199,752,872	212,119,339
45. Interest matured unpaid	62,619,130	65,911,255
46. Dividends matured unpaid	15,825,143	21,359,815
47. Unmatured interest accrued	73,533,125	71,373,440
48. Unmatured dividends declared	26,449,924	26,641,409
49. Accrued accounts payable	169,996,422	233,599,438
50. Taxes accrued	560,731,993	695,867,154
51. Other current liabilities	120,348,632	76,123,979
52. Total current liabilities (items 41 to 51)	1,750,227,392	1,953,266,434
53. Analysis of taxes accrued:		
53–01. U. S. Government taxes	407,848,382	567,475,259
53–02. Other than U. S. Government taxes	152,883,611	128,391,895
54. Other unadjusted credits	254,365,097	274,430,591

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.
[3] Includes obligations which mature not more than one year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.
Subject to revision.

SUPPLY TRADE

A.C.F. Net Sales Were $147,470,154

Consolidated net sales of the American Car & Foundry Co. during the fiscal year ended April 30, 1950, totaled $147,470,154, compared with $219,648,483 in the preceding fiscal year, according to the recently released annual report. Net earnings were $436,193, compared with $4,932,114. Charles J. Hardy, chairman, said in the report that A.C.F. entered the current fiscal year with "orders on the books amounting to approximately $42,000,000—an amount which has been substantially increased by business booked" since close of the fiscal year covered by the report. A year earlier the backlog of unfilled orders totaled about $130,000,000.

The company continues in "a sound, strong and fluid condition," Mr. Hardy added, "with its cash position entirely satisfactory and sufficient for all our needs, present and prospective. Inventories are not out of line with the volume of work on the books." Bank loans which totaled $35,000,000 at the beginning of the latest fiscal year "at the close of the period were reduced to $5,000,000—and this amount will shortly be paid."

Pointing out that the company has accomplished much in the diversification of its business, Mr. Hardy said A.C.F. also has a problem as far as the number and location of its plants are concerned. The company, he explained, was formed in 1899 "by a merger of a number of carbuilding plants located, and not always strategically, in various parts of the country. A number of the plants have since been disposed of—but even so, we today have a number of plants, representing an investment of many millions of dollars, the facilities of all of which cannot at all times be kept in profitable operation." Because of the sporadic nature

(Continued on page 51)

This Journal is

GREASE LUBRICATED

LUBRIKO GREASE

M-1 SPECIAL

FOR ROLLER BEARING CAR JOURNALS

...and so are thousands more in actual daily use!

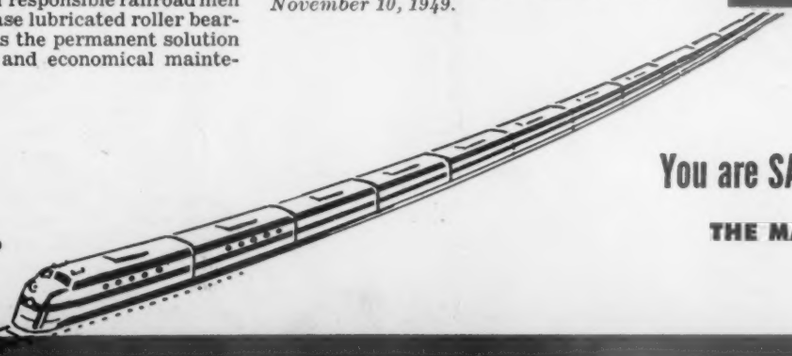
YES, LUBRIKO M-1 SPECIAL GREASE FOR RAILROADS has a performance unequalled by any grease lubricant for railroad roller bearing journal boxes. Millions of trouble-free miles are added to this record every week, making Lubriko M-1 Special grease for railroad car journals the most fully proved grease in America. For many railroads the painstaking years of testing are past—for in tests and in actual use Lubriko M-1 Special has been proved in every make of roller bearing car journal assembly.

Prominent and responsible railroad men feel that the grease lubricated roller bearing journal box is the permanent solution for both safety and economical maintenance. Engineering data on tests and actual road service of grease are available. We will gladly furnish data on Lubriko's performance with any make of roller bearing journal box—write for it today!

"...the roller bearing, properly lubricated, is, in my opinion, the ultimate solution to the hot box problem... and the railroads should go to that goal as quickly as possible..."—statement made by one of the foremost railway authorities in a paper presented at the Pacific Railway Club, November 10, 1949.

LUBRIKO GREASE

M-1 SPECIAL FOR RAILROADS



BOSTON
LOS ANGELES
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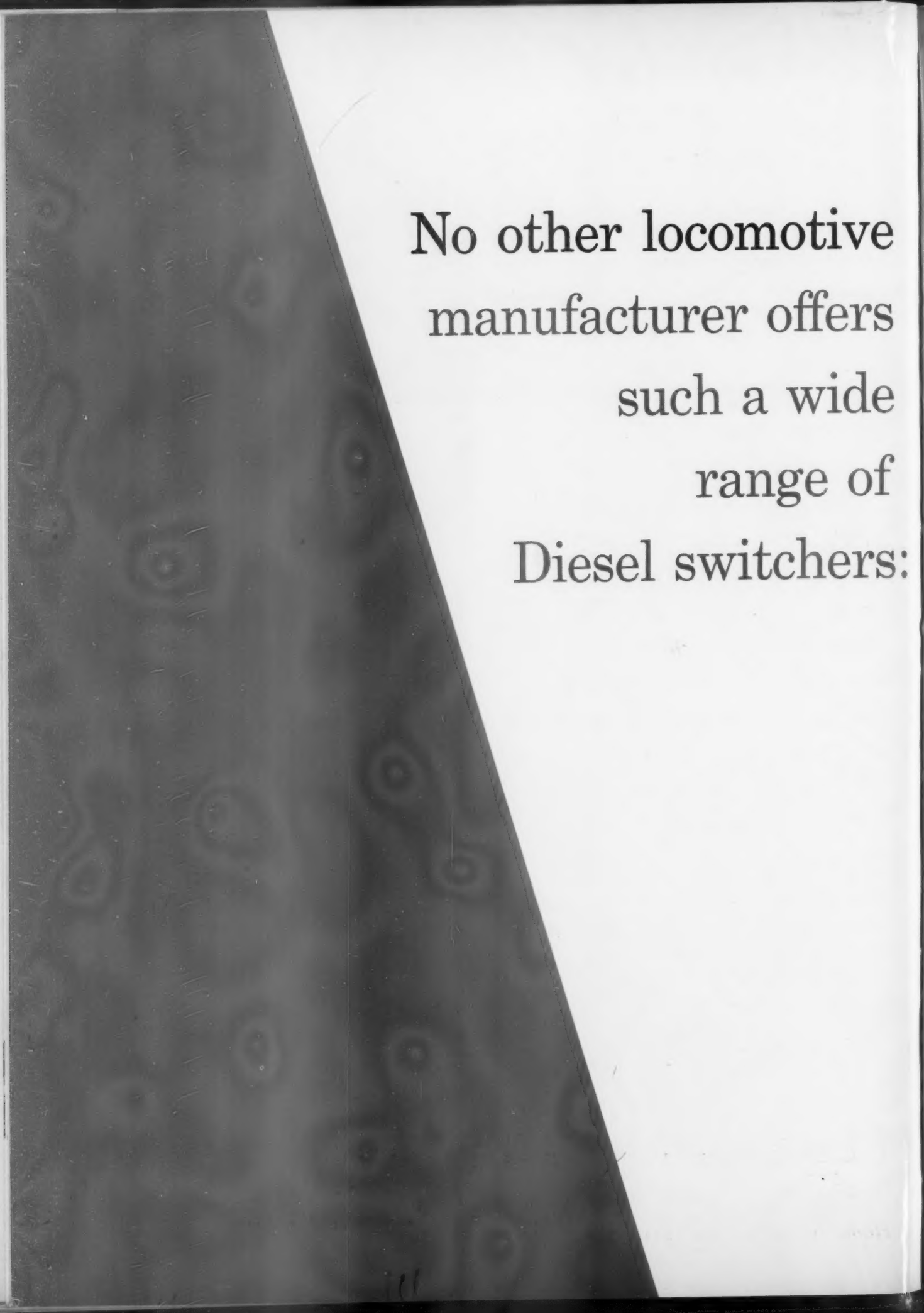
You are SAFE with LUBRIKO

THE MASTER LUBRICANT

MASTER LUBRICANTS COMPANY PHILADELPHIA 48, PA.

"Manufacturers of High Grade Industrial Lubricants for Over 50 Years"



No other locomotive manufacturer offers such a wide range of Diesel switchers:

600 H.P. — 100 ton — for medium and light-duty switching.

800 H.P. — 115 ton — handles jobs ordinarily assigned to 1000 H.P. units.

1200 H.P. — 125 ton — a 20% increase in horsepower — faster speed — greater work capacity.

1500 H.P. — 125 ton — for local freight, local passenger, mixed trains, yard humping, transfer work and other difficult jobs.

2400 H.P. — 250 ton — for transfer service and humping.

3600 H.P. — 375 ton — for the heaviest assignments, in humping, mining and other rugged work.

The *right* power for the job—with high parts interchangeability between all units—explains why so many railroads are continuing to add to their General Motors Diesel fleets at such a rapid rate.

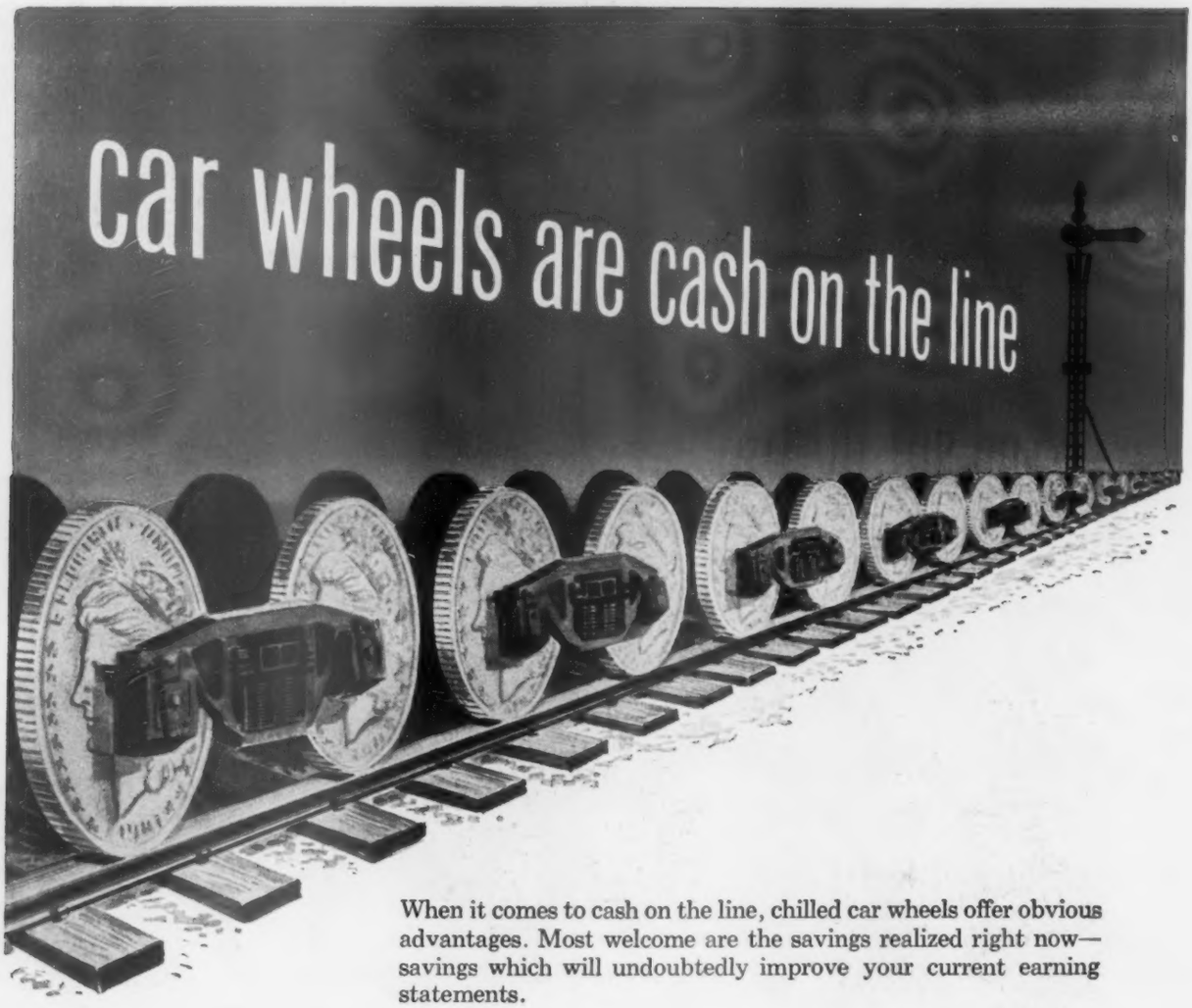
GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

General Motors • La Grange, Illinois

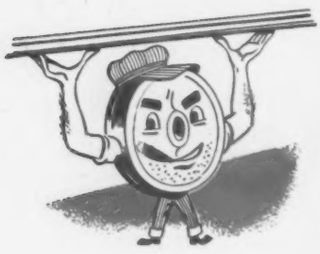
Home of the Diesel Locomotive

car wheels are cash on the line



When it comes to cash on the line, chilled car wheels offer obvious advantages. Most welcome are the savings realized right now—savings which will undoubtedly improve your current earning statements.

but... *how about the upkeep*



In addition to all-important first cost, chilled car wheels save you money all along the line. Reduced inventory, longer brake shoe life, less axle shock, reduced trackwork wear, easier mounting and unusually low exchange rates are added dividends from your car wheel dollar. And, at all times, you will appreciate the ready delivery of standardized, fully inspected chilled car wheels from any of the 25 AMCCW foundries, located strategically throughout the country.

Low first cost
Low exchange rates
Reduced inventory
Short haul delivery
Increased ton mileage
High safety standards
Complete AMCCW inspection
Easier shop handling

AMCCW

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, Ill.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)
Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.
Pullman-Standard Car Mfg. Co.

of equipment buying by railroads, he said, "the earnings of such of our plants as may be profitably engaged have of neecessity had imposed upon them the burden of carrying the plants not so fortunately situated. Your management has under development a program designed to correct the evils of this condition—this involving such a rearrangement of our plants and manufacturing facilities as will give reasonable assurance of the profitable operation of all our facilities, as well those whose activities are given entirely to the building of railroad equipment as those whose facilities are otherwise engaged. The accomplishment of this will naturally involve some cost, but is necessary for the profitable operation of our company as a whole."

Jack Hause has been appointed manager of the transportation division of the apparatus department of the **General Electric Company,** at St. Louis, Mo., headquarters of the department's newly formed mid-states district. Mr. Hause joined G.E. in 1937 and was assigned to general sales engineering work at Washington, D. C.,

Jack Hause

for two years. In 1940 he was transferred to the locomotive and car equipment divisions at Erie, Pa., where he specialized in mine and industrial locomotives and railroad-type electric and Diesel-electric locomotives. He was an application engineer on the new Alco-G.E. gas-turbine electric locomotive at the time of his recent appointment.

Charles H. Jones has been appointed assistant traffic manager of the **Texas Company,** with headquarters at New York. Mr. Jones joined the company as a rate clerk in March, 1929. He advanced through various positions in the railway traffic and sales departments until his appointment as assistant to traffic manager, the position he held at the time of his recent promotion.

Kenneth R. Beardslee, formerly vice-president and marketing manager of the **Carboloy Company,** Detroit, Mich., has been named president, to succeed the late **Walter G. Robbins.** Also, **Eugene F. Wambold,** formerly vice-president in charge of manufacturing, has been appointed to the newly created position of executive vice-president in charge of manufacturing, engineering, employee and community relations, and purchasing.

Albert M. Schieler has been appointed district manager—sales of the **General Steel Castings Corporation** at Granite City, Ill. Mr. Schieler joined the Commonwealth Steel Company and General Steel Castings in 1920 as an office boy, after two years of high school. Subsequently he completed high school at night and also took courses with the International Correspondence Schools and LaSalle Extension University. Until 1929 he held various stenographic and other office jobs. He was then appointed

Albert M. Schieler

material expediter, and from 1934 to 1940 served first as manufacturing engineer, and later as assistant to the works manager at the Commonwealth plant. In 1940 he became superintendent of the finishing and P.M.S. departments at the same plant, and in June, 1945, was made assistant manager of the service department. Mr. Schieler joined the sales department in 1947 as sales representative for the southern district, which position he was holding prior to his recent appointment.

ORGANIZATIONS

H. S. Loeffler is New Head of A.R.E.A.

Through amendments to its constitution, the American Railway Engineering Association has advanced its former senior vice-president, H. S. Loeffler, to the position of president. The move was occasioned by the recent resignation, due to ill health, of President George L. Sitton, which has resulted also in the elevation of T. A. Blair, junior vice-president, to the post vacated by Mr. Loeffler. The constitutional amendments needed to authorize the moves were passed by considerably more than the required two-thirds majority of the association's membership. Provision has been made for election of a new junior vice-president to replace Mr. Blair at the August 4 meeting of the board of directors, to be held in Chicago.

Mr. Loeffler serves as assistant chief engineer of the Great Northern, with headquarters at St. Paul, Minn. Mr. Blair is chief engineer, system, of the Atchison, Topeka & Santa Fe, and has his headquarters at Chicago.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Atlantic Coast Line** is inquiring for 300 70-ton covered hopper cars.

The **Baltimore & Ohio** is inquiring for underframes for 300 70-ton flat cars.

The **Chicago & Eastern Illinois** has ordered 200 50-ton box cars from its Danville, Ill., shops. Authorization for purchase of these cars was noted in *Railway Age* of May 20, page 225. Purchase will be financed through equipment trust certificates.

The road has also ordered 25 additional covered hopper cars to be built by the Thrall Car Company of Chicago Heights, Ill. Delivery of these cars is expected within a few months.

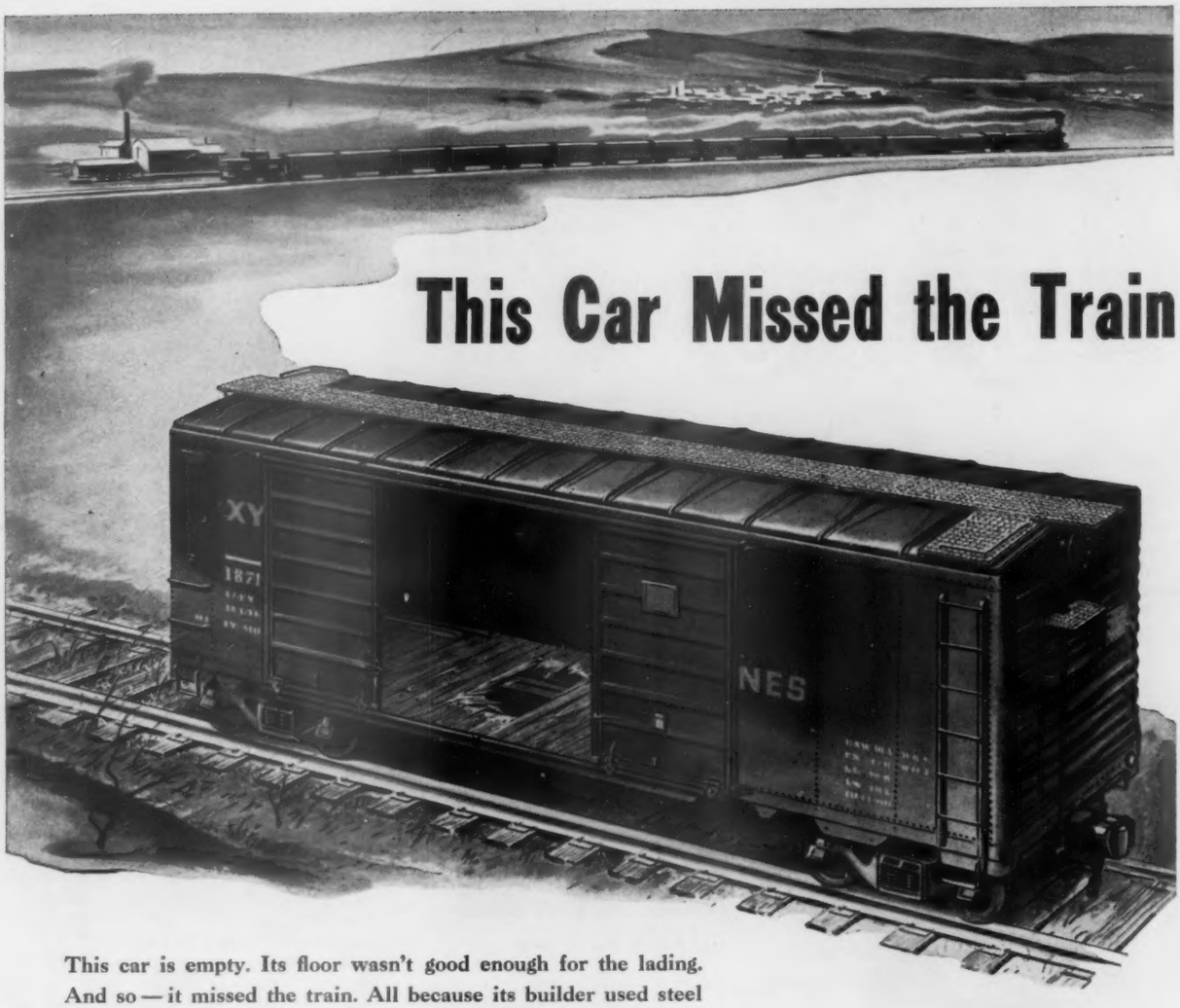
The **Chicago, Milwaukee, St. Paul & Pacific** has authorized construction in its Milwaukee, Wis., shops of 600 iceless refrigerator cars for transporting beer. Ultimate ownership of the cars has not yet been settled.

The **Chicago, Rock Island & Pacific** has increased the number of 70-ton covered hopper cars it has on order from the American Car & Foundry Co. from 100 to 169. The road also is inquiring for material for 500 50-ton flat cars to be constructed in its own shops.

The **Lehigh Valley** has ordered 300 70-ton gondola cars from the Bethlehem Steel Company.

The **New York Central System** plans to place orders in the near future for another 6,000 new freight cars at an estimated cost of approximately $31,500,000. This will increase postwar freight car acquisitions by the Central and affiliated companies to 41,673, at a cost totaling approximately $185,500,000. The Central also is contemplating making arrangements to

News Department continued on next left-hand page



This Car Missed the Train

This car is empty. Its floor wasn't good enough for the lading. And so — it missed the train. All because its builder used steel for everything but the floor. The wooden floor couldn't take it.

An empty freight car is no profit to its owner and no credit to the railroad industry. Freight cars are worth more equipped with NAILABLE STEEL FLOORING. Here are five reasons why:

1. *Cuts down out-of-service time*
2. *Gets more payloads per car*
3. *Takes any kind of mechanical handling equipment*
4. *Improves safety for goods in transit*
5. *Reduces maintenance and repair cost*

Boxes, flats or gondolas—whether you are building or rebuilding—NAILABLE STEEL FLOORING will help your cars spend more time rolling, less time shopped. Learn why it pays for itself in efficiency.

PAT. PEND.

N-S-F
HOLDS BLOCKING BETTER

50-SF-3B

SAVE FLOORING WEIGHT
GAIN FLOORING STRENGTH

In a 40'6" boxcar, to attain floor strength equal to that of NAILABLE STEEL FLOORING—made of corrosion- and abrasion-resistant N-A-X HIGH-TENSILE steel—would require approximately 1,000 pounds more weight if plain carbon steel were used. In a 52'6" gondola, it would require 1,600 pounds more in plain carbon steel.

GREAT LAKES STEEL CORPORATION

Steel Floor Division • Ecorse, Detroit 29, Michigan
UNIT OF NATIONAL STEEL CORPORATION

Further information is available from sales representatives in Detroit, Chicago, Philadelphia, St. Louis, Atlanta, San Francisco

contract with car building shops for complete reconstruction of 2,000 box cars and 2,000 gondolas. The estimated cost of this work is $6,500,000.

The 6,000 new freight cars the Central plans to order include 1,500 70-ton drop-end gondolas, 1,500 55-ton hopper cars, 2,000 55-ton, 40½-ft. box cars, 500 55-ton, 50½-ft. box cars and 500 40-ton refrigerator cars. Of the 6,000 cars, which are for 1951 delivery, 4,000 would be acquired by the New York Central itself, 1,500 by the affiliated Pittsburgh & Lake Erie, and 500 by the Central-owned Merchants Despatch Transportation Corporation.

In *Railway Age* of July 15, page 67, an N.Y.C. inquiry for 1,500 70-ton drop-end gondola cars, 1,500 55-ton hopper cars, 1,000 55-ton 40½-ft. box cars and 500 55-ton 50½-ft. box cars was reported. This has now been changed, as noted in the preceding paragraph, increasing the 55-ton 40½-ft. box cars to 2,000 and adding 500 refrigerator cars to the lot.

The **Reading** has ordered an additional 1,000 50-ton hopper cars from the Bethlehem Steel Company (see *Railway Age* of April 15, page 71). The road also is inquiring for 500 gondola cars.

The **Southern Pacific** has ordered 1,000 50-ton box cars from the Pullman-Standard Car Manufacturing Company.

The **Union Tank Car Company** has ordered 225 tank cars from its own shops. The cars will be equipped with welded steel tanks for transporting liquified petroleum gases.

MARINE

The **Reading's** board of directors has authorized construction of three Diesel-powered tugboats for use in New York harbor to replace old equipment.

LOCOMOTIVES

The **Duluth, South Shore & Atlantic** has ordered six 1,600-hp. Diesel-electric locomotive units from the Baldwin Locomotive Works, and has also announced its intention to acquire three 1,000-hp. Diesel road-switchers in the near future. Delivery of the first unit from Baldwin is expected in about three weeks and the remainder will be delivered within six months. After acquisition of all nine locomotives, the road will be completely Dieselized, according to its president, Henry S. Mitchell.

SIGNALING

The **Boston & Maine** has ordered from the General Railway Signal Company equipment for installation of a unit-wire relay interlocking at Salem, Mass. The control machine will have an 18-in. by 20-in. panel equipped with 10 track lights and 10 levers for control of 4 switch machines, 2 spring switches and 11 signals. Included in this order are type B relays, type SA dwarf and high searchlight signals, and model 5C switch machines.

The Electro-Motive Division of General Motors Corporation has placed an order with the Union Switch & Signal Co. for twenty-four sets of four indication type E cab signal equipment, to be installed in Diesel-electric locomotives which are being built for the **Pennsylvania.**

Fairbanks, Morse & Co. has placed an order with the Union Switch & Signal Co. for 16 sets of four-indication type E cab signal equipment, for installation in Diesel-electric locomotives being built for the **Pennsylvania.**

The Lima-Hamilton Corporation has placed an order with the Union Switch & Signal Co. for five sets of two-channel, one-way FM inductive train communication equipment. This equipment will be installed in Diesel-electric transfer locomotives which are being built for the **Pennsylvania.**

The **Texas & Pacific** has placed an order with the General Railway Signal Company for equipment to install type F three-wire centralized traffic control between Big Sandy, Tex., and Mineola, 23 mi. The present control machine, located at Marshall, Tex., will be expanded by the addition of a 20-in. panel equipped with 33 track lights and 16 levers for the control of 6 switch machines, 1 switch lock and 24 signals. Included in this order are model 5D switch machines, type SA searchlight signals and types K and B relays.

CAR SERVICE

I.C.C. Service Order No. 855, effective from July 21 until August 22 unless otherwise modified, authorizes railroads serving Colorado, Kansas, Missouri, Nebraska, Iowa, Wyoming, and South Dakota, to furnish not more than two refrigerator cars (not suitable for transporting commodities requiring protective service), or not more than two single-deck stock cars (36 ft. or less in length) in lieu of one box car ordered for the transportation of "alfalfa meal, or any other commodity suitable for movement in such cars," between origins and destinations in those states.

I.C.C. Service Order No. 851 has been modified by amendment No. 1, effective July 25. The amendment adds Nevada to the territory covered by the order. Thus the order now authorizes railroads serving Oregon, California, Arizona, and Nevada, to furnish not more than three S.F.R.D. or P.F.E. refrigerator cars (not suitable for transporting commodities requiring protective service) in lieu of one box car ordered for the transportation of carload freight between origins and destinations in those states.

FINANCIAL

I.C.C. Hears Oral Argument For Reopening D.T. & I. Case

The Interstate Commerce Commission heard oral argument July 25 on whether it should reopen for further consideration the recent case in which the Pennsylvania Company, a Pennsylvania Railroad subsidiary, and the Wabash were authorized to acquire control of the Detroit, Toledo & Ironton. The acquisition was approved in a report handed down May 3 by the commission's Division 4. (See *Railway Age* of May 6, page 62.)

Petitions asking for a reopening of the case were filed by the New York Central, the Baltimore & Ohio and the New York, Chicago & St. Louis. These roads have taken the stand that if the Ironton cannot remain independent, they should be allowed to share in its control. Technically, the July 25 argument was whether the case should be reopened for review of Division 4's decision, but the presentations were such as to review the entire case.

Jacob Aronson, vice-president and general counsel, N.Y.C.; F. E. Baukhages, general solicitor, B.&O.; and Thomas O. Broker, assistant general counsel, N.Y.C.&St.L., appeared on behalf of the protesting roads, while Albert Ward, general attorney, P.R.R., and R. B. Elster, general attorney and commerce counsel, Wabash, represented their respective roads. M. C. Smith, Jr., general solicitor of the Erie, made a brief presentation for that road, while Robert E. Quirk appeared for the Akron, Canton & Youngstown.

Mr. Baukhages said the protesting roads have as a common factor their competition with the P.R.R. He argued that acquisition of the Ironton by the P.R.R. would reduce the present "keen competition" in the Detroit area, and would cause the protesting roads to suffer heavy losses in diverted traffic. "The effect of this transaction on competition is the focal point in this case," he added; and went on to say that under present arrangements the Ironton "puts the B.&O. into Detroit" through interchange arrangements. He argued that the D.T.&I. should remain an independent road, which in 1948, interchanged 21,500 cars with the B.&O.

Mr. Broker told the commission that P.R.R.-Wabash acquisition of the Ironton will effectively exclude the N.Y.C.&St.L. from Detroit. He said that on the basis of interchange his road has a better basis for ownership

News Department continued on next left-hand page

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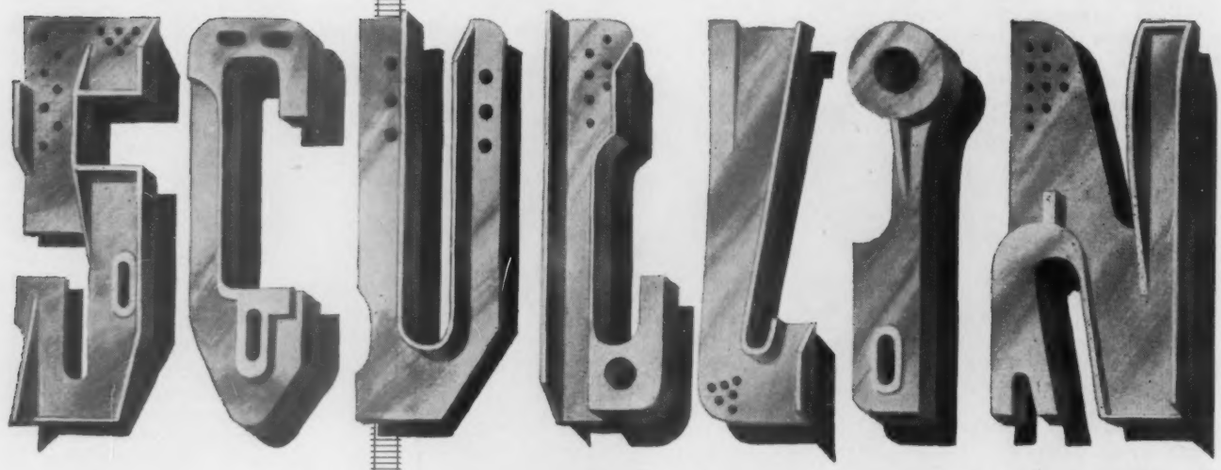

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of the Ironton than does the P.R.R. Mr. Broker asked that the I.C.C. either deny outright the acquisition as it now stands, or, as a second choice, permit the protesting roads to share in control of the D.T.&I.

The argument by Mr. Aronson was largely an examination of why the P.R.R. and Wabash seek to control the D.T.&I. Mr. Aronson said these roads seek to "protect themselves" from "unfriendly competition," and charged that the transaction would be "an acquisition in the interest of the Pennsylvania and the Wabash, but not in the public interest." He also asked that the road be left free, but that the N.Y.C. be allowed to participate if it is sold to another railroad by its present owners.

In reply to questions by Commissioner Mahaffie, Mr. Aronson said the N.Y.C. does not seek to control the Ironton, but asks only to have a "protecting vote" in case the P.R.R.-Wabash transaction is consummated. He denied that such a "protecting vote" would impose a "dead hand" on D.T.&I. operations. However, the commissioner then questioned the value of investing in control of the D.T.&I. when such investment would not insure a minority road's position.

Mr. Ward and Mr. Elster, defending the Division 4 report in favor of the acquisition, cited various advantages which they said will accrue to the public as a result of the transaction. Mr. Elster said conditions imposed by division 4 in connection with the acquisition "are the most comprehensive and far reaching of any we can find." These conditions are designed to insure continued neutrality of the Ironton, and continue routes and interchange arrangements to which the Ironton is now a party.

Mr. Ward said acquisition of the D.T.&I. will enable the P.R.R. to give "much better service" between Cincinnati and Detroit, give the Ironton more and better equipment, and keep the earnings of the Ironton inside the industry "where it can well be used." Mr. Ward went on to deny contentions by the protesting roads that their interchange arrangements would suffer as a result of the acquisition.

The brief presentations by the Erie and the A.C.&Y. took no stand on the acquisition question itself. However, the Erie reiterated its desire to acquire an interest in the Springfield Suburban, a switching line at Springfield, Ohio. The Division 4 report authorized this acquisition on a joint basis with the Pennsylvania company. The A.C.&Y. said it would prefer that P.R.R.-Wabash control of the Ironton be denied completely, rather than have the joint-ownership arrangement proposed by the protesting roads. However, the latter road went on to say that, if the commission found in favor of joint ownership, it would itself seek no share in such ownership.

Cape Fear Railways.—*Stock Issue.*—This road has been authorized by the I.C.C. to issue $31,600 of common stock, consisting of 316 shares at par value of $100 each. This stock will replace a like number of shares issued by the road from time to time without I.C.C. approval. The commission held the stock issued without authorization to be void, and the road recalled it in March, 1950.

Erie.—*Niagara Junction Terminals.*—Division 4 of the I.C.C. has prescribed that this road shall pay a rate of $1 per loaded car for using Niagara Junction terminal facilities while serving the Electro Metallurgical Company plant at Niagara Falls, N. Y. In arriving at this amount the commission considered the Junction's claim that use of its facilities by the Erie interfered with its own operations and therefore caused a loss in revenue. The Erie, which has operated into the Electro plant regularly since 1935, originally offered to pay $2,546.64 annually, beginning January 1, 1949, for use of N. J. facilities. The New York Central, which owns 50 per cent of the Junction stock, objected and "demanded payment of a substantially larger amount." The Lehigh Valley, owner of 25 per cent of the terminal road's stock, favored acceptance of this amount. The other quarter of N. J. stock is owned by the Erie. Division 4 ordered the $1 rate per loaded car to become effective retroactive to January 15, 1948.

Florida East Coast.—*Reorganization Expenses.*—The I.C.C. has reaffirmed its order of October 20, 1948, approving the sum of $168,460.47 to be paid for services rendered and reimbursement of expenses to certain parties in interest in this road's reorganization. The payment covers the period from February 15, 1945, through May 15, 1948. At the same time the commission again deferred fixing maximum limits of allowances to be paid to the Atlantic Coast Line and to the S. A. Lynch Corporation for the same period.

Gulf, Mobile & Ohio.—*Trackage Rights into Birmingham, Ala.*—The I.C.C. has authorized the Southern to intervene in connection with this road's proposal to acquire a new route into Birmingham, Ala. The Southern said it wished to be made a party to the proceedings "for the protection of its interests." The G.M.&O. proposal, as outlined in *Railway Age* of May 13, page 68, contemplates abandonment of operations under trackage rights over 172 mi. of Southern and Illinois Central lines between Ruslor, Miss., and Birmingham, and the acquisition of new trackage rights over 56.5 mi. of Louisville & Nashville line between Tuscaloosa, Ala., and Birmingham. The I.C. is opposing the G.M.&O. proposal.

Pennsylvania Company.—*Collateral-Trust Bonds.*—The I.C.C. has dismissed, at this company's request, an application filed January 26, 1949, seeking authority to issue $16,000,000 of collateral-trust sinking fund bonds in connection with acquiring control of the Detroit, Toledo & Ironton. The application was filed simultaneously with that in which the P.R.R. and the Wabash asked for authority to acquire the D.T.&I. The Pa. Company, a wholly owned subsidiary of P.R.R., would acquire the D.T.&I. stock on behalf of the parent company. Since the original application was filed in January, 1949, another plan for financing the D.T.&I. purchase was proposed and the commission has approved the later plan. (See *Railway Age* of July 1, page 85.)

Rutland. — *Reorganization.* — This road has applied for authority to consummate the reorganization plan approved by the I.C.C. on December 11, 1946. (See *Railway Age* of December 28, 1946, page 1093.) The road also seeks authority to issue securities and assume obligations as contemplated by the plan. Capitalization of the reorganized company, as set out in the commission approved plan, will be 49,817.5 shares of 5 per cent preferred stock and 60,112 shares of common, all with par value of $100 per share.

New Securities

Application has been filed with the I.C.C. by:

ST. LOUIS-SAN FRANCISCO.—To assume liability for $3,705,000 of series G equipment trust certificates to finance in part 24 Diesel-electric locomotive units and 195 freight cars, costing an estimated total of $4,639,666; as follows:

Description and Builder	Estimated Unit Cost
18 1,500-hp. road-switching units (Electro-Motive Division, General Motors Corporation)	$140,662
6 1,500-hp. freight-passenger road units (Electro-Motive)	169,000
95 70-ton covered hopper cars (Pullman-Standard Car Manufacturing Company)	6,250
100 flat cars (Builder not announced)	5,000

The certificates, to be dated August 1, will mature in 15 annual installments of $247,000 each beginning August 1, 1951. They will be sold by competitive bids, with the interest rate to be set by such bids.

Division 4 of the I.C.C. has **authorized:**

Erie.—To assume liability for $8,100,000 of equipment trust certificates to finance in part 64 Diesel-electric locomotives, costing an estimated $10,244,000. (See **Railway Age** of July 8, page 112). The certificates, to be dated July 15, will mature in 30 semiannual installments of $270,000 each, beginning January 15, 1951. The commission's report approved a selling price of 99.0399 with interest at 2⅜ per cent — the bid of Salomon Bros. & Hutzler and 3 associates — which will make the average annual cost of the proceeds approximately 2.52 per cent. The certificates were reoffered to the public at prices yielding from 1.4 to 2.65 per cent, according to maturity.

Security Price Averages

	July 25	Last week	Last year
Average price of 20 representative railway stocks	46.37	42.67	37.69
Average price of 20 representative railway bonds	93.21	91.06	85.24

Dividends Declared

Atlantic Coast Line.—$1, payable September 12 to holders of record August 15.

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Bibliography of Office Machine Articles in Railway Age

*Car Records on Tabulating Equipment	May	14, 1949
*C. N. R. Has Cut Expense in Taking Inventory	May	14, 1949
*Machines Prorate Freight Revenues (Reading)	May	14, 1949
Improved Visible Accounting Methods	May	14, 1949
Improved Photocopy Camera	May	14, 1949
Electronic Calculating Punch	May	14, 1949
Portable Bookkeeping	May	14, 1949
Twin Punch Machines	May	14, 1949
Automatic Disk Resurfacer	May	14, 1949
Electric Typewriter with Dual Feed	May	14, 1949
Portable Television for Industry	May	14, 1949
Recordak Film Reader	May	14, 1949
Bruning Whiteprinter	May	14, 1949
Wassell Units (Picture only)—10 add'l purchased by P. R. R.	May	14, 1949
*Paper-Work Speed-Up Reduces Delays in Freight Delivery	May	21, 1949
*Mechanization in Spotlight at Accounting Officers' Convention	May	28, 1949
Rock Island Installs New Reservation System—(Picture only)	May	28, 1949
*Freight Sta. Meeting—Report Comm. on Station Office Operation	June	11, 1949
*Superintendents' Conv.—(Excerpt re. use of punched cards)	June	25, 1949
*Burlington Saves Money with Visible Records	June	25, 1949
File Rotates Horizontally	June	25, 1949
*P. & S. Div. Meeting—Report: Pur. Dept.—Organization and Procedure	July	2, 1949
*Diesel Parts Records on B. & M.	Aug.	27, 1949
Ticket Vending Machine on P. R. R. (Picture and Caption)	Aug.	27, 1949
*Paperwork—and the 40-Hour Week	Sept.	3, 1949
*P. R. R. Mechanizes Freight Offices	Sept.	17, 1949
Unit for Development of Photo-copied Documents	Oct.	15, 1949
Tickometer	Nov.	5, 1949
New Ways to Handle Reservations and Issue Tickets	Nov.	19, 1949
*Bookkeeping Machines Supersede Pens	Jan.	7, 1950
*Economy in Interline Ticket Accounting	Jan.	28, 1950
"The Seeing Eye of Management" (Excerpt of G. F. Glacy speech)	Jan.	28, 1950
Two New Models of Multigraph Machines	Feb.	4, 1950
*Canadian Pacific Speeds Car Tracing	Feb.	11, 1950
*Office Methods Group Pays Its Way (B. & O.)	Feb.	18, 1950
*No More Cut-Ups—(N. Y., N. H. & H.)	Feb.	18, 1950
Time Stamp	Mar.	25, 1950
*New Developments Promise Relief from High Cost of Paperwork	June	3, 1950
*New Filing System Saves Money	June	10, 1950
*New Duplicating Process Saves Money for Pullman	June	10, 1950

*Feature Articles

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Railway Age is the medium to use in reaching the men who initiate mechanization of railway office methods. RAILWAY AGE is read for its authoritative information by accounting officers, station department officers, purchases and stores officers as well as the top management who control expenditures and finally approve appropriations.

Railway Age is the productive railway contact for business machine manufacturers. Final buying decisions are made on every major purchase by top management of railroading. It is significant that railway presidents and vice-presidents as well as accounting and other departmental officers have spoken recently of the importance of office mechanization to the railroads. RAILWAY AGE is read by over 90% of the management group which you must reach for favorable consideration and approval. RAILWAY AGE reaches the entire range of executives, department heads, operating and purchasing officers. RAILWAY AGE gets top priority reading by the management group and stands first in industry prestige and influence. It is the railway industry's authoritative weekly magazine. It covers all important developments while the news is news. It is the only railway business paper that renders this service.

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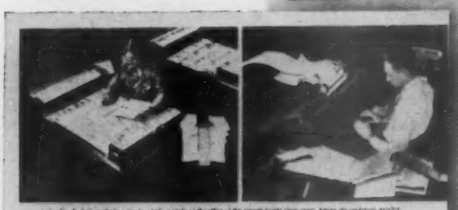

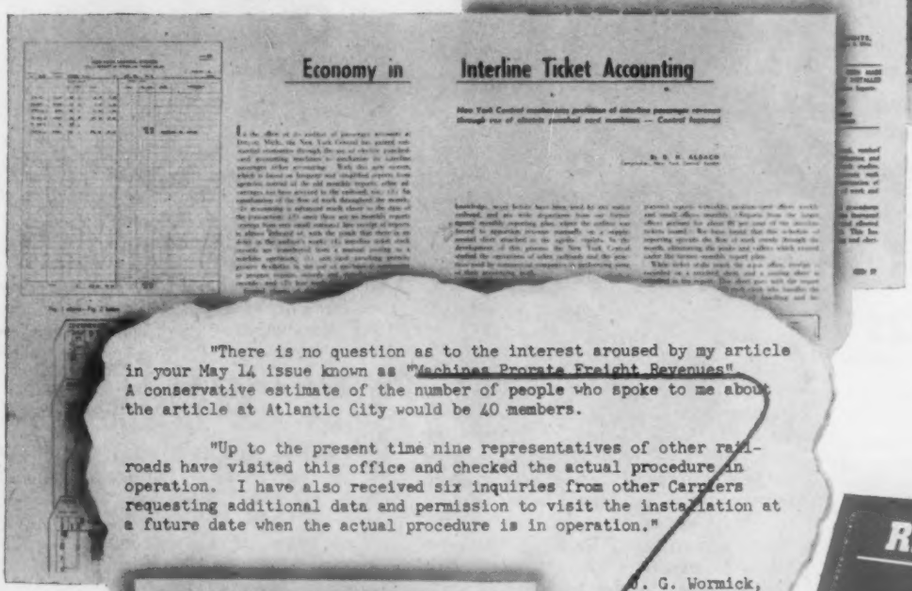

"There is no question as to the interest aroused by my article in your May 14 issue known as "Machines Prorate Freight Revenues". A conservative estimate of the number of people who spoke to me about the article at Atlantic City would be 40 members.

"Up to the present time nine representatives of other railroads have visited this office and checked the actual procedure in operation. I have also received six inquiries from other Carriers requesting additional data and permission to visit the installation at a future date when the actual procedure is in operation."

J. G. Wormick,
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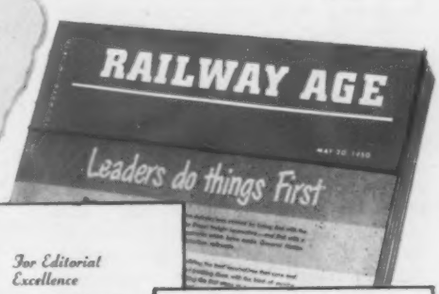
Note: *Effective July 1st, new, larger page size of all 4 Simmons-Boardman publications. New page size 9 x 12. Greater attention value. Easier to read. Wider margins. More impact for advertisers.*



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Erie & Kalamazoo.—$1.75, irregular, payable August 1 to holders of record July 17.
Louisville & Nashville.—88¢, quarterly, payable September 12 to holders of record August 1.
New York, Chicago & St. Louis.—6% A preferred, $10, accumulated, payable October 2 to holders of record September 8.

Investment Publications

[The surveys listed herein are, for the most part, prepared by financial houses for the information of their customers. Knowing that many such surveys contain valuable information, Railway Age lists them as a service to its readers, but assumes no responsibility for facts or opinions which they may contain bearing upon the attractiveness of specific securities.]

Baker, Weeks & Harden, One Wall st., New York 5.
Current Railroad Review. July 18.

Fahnestock & Co., 65 Broadway, New York 6.
High Yield Railroad Bonds. July 24.

Vilas & Hickey, 49 Wall st., New York 5.
Chesapeake & Ohio—Alleghany Corp. July 11.
Railroad Income Bonds. July 10.
A Reappraisal of the Railroad Outlook. July 14.

R. W. Pressprich & Co., 48 Wall st., New York 5.
Competing Fuels and Railroad Coal Traffic. Price, $2.50.

RAILWAY OFFICERS

EXECUTIVE

August Syverson, whose election as president of the Lake Superior & Ishpeming, with headquarters at Marquette, Mich., was reported in *Railway Age* of June 24, was born on June 18, 1878, at Norwalk, Wis., and entered railroad service in November, 1893, as a station helper with the Chicago & North Western. Subsequently he held the positions, consecutively, of telegraph operator, train dispatcher, chief train dispatcher and trainmaster with the North Western until 1913, when he joined the Ann Arbor as superintendent. In April, 1920, he joined the L. S. & I. at Marquette as superintendent, and in 1928 became assistant general manager. Mr. Syverson was appointed vice-president and general manager in July, 1939, in which capacity he was serving at the time of his election as president.

Luther A. Thomas, assistant vice-president, special service and freight claims, of the Southern system at Washington, D. C., will retire on August 1 at his own request, because of ill health, after 35 years of service. **George T. Lane,** superintendent, special service, has been promoted to the newly-created position of assistant to vice-president, special service, with headquarters as before at Washington. **J. Roland Formby,** manager stations and transfers, has been appointed assistant to vice-president in charge of freight claims, stations and transfers at Chattanooga, Tenn., effective August 1.

Mr. Thomas was born at Madisonville, Tenn., on March 24, 1902, and attended the Asheville, N. C., public schools, Bingham Military School and the University of North Carolina. Entering the service of the Southern at Asheville in 1915 as a messenger during high school vacations, he subsequently held various positions until October, 1937, when he became superintendent of police at Washington. On July 1, 1939, Mr. Thomas was appointed assistant to vice-president and

Luther A. Thomas

on December 1, 1946, became assistant vice-president, special service and freight claims. During World War II he held key positions in internal security in the United States, as well as in law enforcement. He was railway representative for the Military District of Washington, a member of the War Department Railroad Security Commission, and a consultant and special assistant to the Director of Railway Transportation in the Office of Defense Transportation. As such, he was chairman of the Military Security Committee of the O.D.T. He also was coordinator of Civilian Defense for the Southern in Washington. Elected chairman of the Protective Section of the Association of American Railroads in June, 1941, he served a five-year wartime tenure of office.

F. H. Allard, assistant to vice-president—operation of the Chicago, Milwaukee, St. Paul & Pacific, at Chicago, will retire on July 31. He will be succeeded by **C. P. Downing,** staff assistant.

H. M. Rainie, purchasing agent of the Boston & Maine at Boston, Mass., has been elected vice-president in charge of purchases and stores of that road, the Maine Central and the Portland Terminal, succeeding **A. W. Munster,** who has retired after 46 years of railroad service, 38 of which have been with the B.&M. Mr. Munster was born at Waltham, Mass., on July 24, 1882, and attended Massachusetts Institute of Technology. He entered railroad service in 1904 as an apprentice and machinist on the Northern Pacific. In 1909 he joined the New York, New Haven & Hartford as materials inspector, later becoming engineer of tests. In 1912 he was appointed

A. W. Munster

general storekeeper of the B.&M. and became purchasing agent of that road at Boston in 1917. In 1933 he was elected vice-president in charge of purchases and stores of the B.&M., the M.C. and the P.T. Mr. Munster is a member of the advisory committee of the Purchases & Stores Division of the Association of American Railroads.

FINANCIAL, LEGAL & ACCOUNTING

Charles R. Chambers, chief clerk to the paymaster of the Southern, has been appointed paymaster of the system, with headquarters as before at Washington, D. C., succeeding **H. K. Murphy,** who will retire on August 1, after 47 years of service.

J. O. Yates, assistant auditor of disbursements of the Chesapeake & Ohio, has been appointed auditor of disbursements, with headquarters as before at Huntington, W. Va. **R. L. Austin** has been appointed assistant auditor of disbursements at Huntington.

Roy G. Bundy, tax commissioner of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, will retire on August 1. He will be succeeded by **M. L. Boydston,** tax agent, with headquarters at the same point. **George W. Loderhose,** freight claim agent at Chicago, also will retire and will be succeeded by **M. B. Mortensen,** assistant freight claim agent at that point.

Mr. Bundy was born on December 20, 1884, at Whitewater, Wis. He graduated from the University of Wisconsin in civil engineering in 1909 and attended special courses in the Marquette University College of Law from 1917 to 1919. He entered railroad service in the summer of 1906 as an

(Continued on page 61)

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axeman and rodman in the engineering department of the Milwaukee. After graduation from college, he became assistant engineer, maintenance of way, with the Northern Pacific at Spokane, Wash. In December, 1909, he left the N.P. to work for the city of Spokane as an inspector for the city engineer, returning to the Milwaukee as an instrumentman in the engineering department at Milwaukee, Wis., in 1911. Later the same year he was transferred to the tax department at that point, in which department he held various clerical posts until 1921, when he became tax agent. When the tax department was moved to Chicago in 1937, Mr. Bundy was transferred in that position. He was appointed tax commissioner in January, 1949.

E. A. Vik, whose election as secretary of the Chicago & North Western system, with headquarters at Chicago, was reported in the *Railway Age* of June 24, entered railroad service in 1915 as a clerk in the general car foreman's office of the Chicago, St. Paul, Minneapolis & Omaha (part of the C. & N. W. system) at Hudson, Wis. He subsequently served as contract attor-

E. A. Vik

ney, assistant secretary, assistant to executive vice-president and director of personnel of the Omaha line. In 1943 he was appointed assistant director of personnel of the North Western system, at Chicago, and last year he was elected assistant secretary. He was serving in the latter capacity prior to his election as secretary.

OPERATING

J. C. Grisinger, whose retirement as general manager, Lines East of the Missouri river, of the Chicago, Burlington & Quincy, with headquarters at Chicago, was reported in the *Railway Age* of July 1, was born in Lenox Iowa, on June 30, 1880. Mr. Grisinger entered railroad service in 1896 as a station helper with the Burlington & Missouri River (now C. B. & Q.), serving in this capacity and as telegraph operator until 1900. Subsequently he held the positions successively of train dispatcher, assistant chief dispatcher and chief dispatcher on the Burlington. In 1911 he was appointed trainmaster, and six years later was made inspector of transportation, becoming division superintendent in 1918, in which

J. C. Grisinger

capacity he served at Sterling, Colo., and Casper, Wyo. Mr. Grisinger was advanced to general superintendent, Central district, at Burlington, Iowa, in 1931, and promoted to general manager, Lines East of the Missouri river, in 1946.

Ernest L. Potarf, whose promotion to general manager, Lines West of the Missouri river, of the Chicago, Burlington & Quincy, with headquarters at Omaha, Neb., was reported in *Railway Age* of July 1, has served with the Burlington continuously since 1919. He was appointed division engineer at Alliance, Neb., in 1922, and became assistant engineer at Chicago in 1931. Three years later Mr. Potarf was advanced to district engineer,

Ernest L. Potarf

maintenance of way, at Omaha, where he remained until his appointment in 1939 as assistant superintendent at Sterling, Colo. From April, 1945, to April, 1946, he held the same position at Alliance, subsequently being promoted to superintendent at Casper, Wyo. He was transferred to McCook, Neb., in October, 1948, and in September, 1949, was advanced to assistant to vice-president—operation at Chicago, in which capacity he served until his latest promotion.

Frank W. Flannigan, assistant superintendent of transportation of the Chicago, Aurora & Elgin, has been appointed assistant to general manager, with headquarters at Wheaton, Ill.

E. D. Holcomb, superintendent of the Illinois Central's Illinois division, at Champaign, Ill., will retire on August 1, after 50 years of service. **R. L. Tooker,** superintendent transportation at Chicago, will succeed Mr. Holcomb. The position formerly held by Mr. Tooker will be abolished. **W. E. Davis,** superintendent of the Iowa division, at Waterloo, Iowa, will go to the Kentucky division, at Paducah, Ky., in the same capacity, to succeed **T. K. Williams,** who will be transferred to the Memphis division, at Memphis, Tenn. Mr. Williams will succeed **E. H. Buelow,** who is to become superintendent of the Springfield division, at Clinton, Ill., replacing **O. H. Zimmerman, Jr.** Mr. Zimmerman will be transferred to Waterloo, succeeding Mr. Davis.

Mr. Holcomb was born on December 3, 1883, and started his career with the I. C. in June, 1900, as a car record clerk. Subsequently he held various positions until 1917, when he was appointed trainmaster of the Eldorado-Johnson City district of the St. Louis division. He later served successively in the same capacity on the St. Louis-Carbondale and Centralia-Murphysboro districts of the same division, being promoted in 1926 to superintendent of the Springfield division. In March, 1929, Mr. Holcomb was transferred to the Illinois division, and the following October was made general superintendent of the Yazoo & Mississippi Valley (now part of the I. C.). From 1931 to 1932 he served as superintendent at Vicksburg, Miss., and later held the same position at Memphis until June, 1944, when he became superintendent at Champaign.

Caleb Corser, superintendent of the Northern Pacific's Lake Superior division, at Duluth, Minn., has been promoted to assistant general manager, with headquarters at Seattle, Wash., effective August 1, succeeding the late **J. T. Stotler,** whose death was reported in the *Railway Age* of July 22. **W. C. Smith,** assistant superintendent, Yellowstone division, at Billings, Mont., becomes superintendent at Duluth, succeeding Mr. Corser, and is in turn succeeded by **H. O. Whitten,** trainmaster at Jamestown, N. D. **S. A. Anderson,** roadmaster at Glendive, Mont., succeeds Mr. Whitten.

The Chicago, Milwaukee, St. Paul & Pacific has announced the retirements of three superintendents and one

trainmaster, effective July 31: **G. H. Hill,** division superintendent at Spokane, Wash.; **F. T. Buechler,** superintendent of the Superior division (which is to be consolidated with the Milwaukee division) at Green Bay, Wis.; **R. C. Dodds,** superintendent at Mason City, Iowa, and **H. E. Sittler,** passenger trainmaster at Chicago Union Station. The following changes in the Milwaukee's operating department have been occasioned by these retirements: **P. J. Weiland,** superintendent at Ottumwa, Iowa, transferred to succeed Mr. Dodds; **J. T. Hayes,** trainmaster at LaCrosse, Wis., advanced to assistant superintendent at Green Bay; **R. A. Middleton,** assistant superintendent at Savanna, Ill., transferred to Ottumwa; **F. G. McGinn,** assistant superintendent at Dubuque, Iowa, transferred to succeed Mr. Middleton; **J. O. Willard,** trainmaster at Austin, Minn., advanced to succeed Mr. McGinn; **G. W. Riley,** trainmaster at Ottumwa, transferred to replace Mr. Hayes at LaCrosse; **R. R. Brown** and **J. T. DeYoung,** appointed trainmasters at Austin; **N. J. Klein,** made trainmaster at Minneapolis, Minn., and **K. O. Schoeneck,** appointed passenger trainmaster at Chicago Union Station, succeeding Mr. Sittler.

Mr. Hill was born in December, 1884, in Clinton county, Iowa, and entered the service of the Milwaukee in July, 1897, as a station helper at Delmar Junction, Ill. Subsequently he held various positions until 1924, when he became trainmaster at St. Maries, Idaho. Four years later he was advanced to superintendent at Bellingham, Wash., serving in the same capacity from 1929 to 1933 at Milwaukee, Wis., and Miles City, Mont. In 1933 he became assistant superintendent at Spokane, and in March, 1942, was transferred to Tacoma, Wash., as superintendent, being appointed superintendent at Spokane in June, 1943.

Mr. Buechler was born in Chicago on June 22, 1885, and received his high school education at Brownton, Minn., entering railroad service in November, 1902, with the Milwaukee as an operator at Stewart, Minn. After holding various positions, in 1923 he was appointed trainmaster on the LaCrosse division. From 1925 to 1926 he served as assistant superintendent of the Twin City terminals, subsequently being promoted to superintendent of the Sioux City and Dakota division. Mr. Buechler was transferred to the Superior division in 1932.

Born on June 16, 1884, in Shannon, Ill., Mr. Dodds took a business course at Des Moines, Iowa, following graduation from high school. He started his career with the Milwaukee in 1901 as a helper. In 1903 he became a telegraph operator on the Northern Pacific, and from 1905 to 1909 served in the general office of the Union Pacific at Omaha, Neb. Subsequently he returned to the Milwaukee to serve as telegraph operator, train dispatcher and chief dispatcher until 1924 when he became trainmaster. In 1929 he was appointed assistant superintendent, and in 1936, superintendent.

C. F. Grimes, assistant division superintendent of the New York Central, has been promoted to division superintendent, with headquarters as before at Syracuse, N. Y., succeeding **J. B. Delaney,** who is retiring after 51 years of service. Mr. Delaney was born at Macedon, N. Y., on July 10, 1882, and entered railroad service on June 1, 1899, as timekeeper in the maintenance of way department of the Central at Macedon. He later became telegraph operator and relief agent on the West Shore (now N.Y.C.). After serving in various other capacities on the N.Y.C. at Newark, N. Y., Buffalo, and Rochester, Mr. Delaney was appointed assistant superintendent at Syracuse on December 1, 1936. He became superintendent of the Pennsylvania division at Jersey Shore, Pa., on September 1, 1942, returning to Syracuse on January 1, 1947.

TRAFFIC

Daniel J. Collins, whose retirement as freight traffic manager of the Missouri-Kansas-Texas, at St. Louis, Mo., was reported in the *Railway Age* of June 10, was born on February 23, 1884, in that city. Mr. Collins attended the St. Louis public schools and Washington University, and entered railroad service in October, 1899, as a messenger with the Katy at St. Louis. From 1908 to 1924, he served successively

Daniel J. Collins

as live stock agent at National Stock Yards, Ill., contracting agent in the commercial office at St. Louis, chief clerk to assistant general freight agent and chief clerk in the general freight office at St. Louis. Subsequently he was advanced to assistant general freight agent at St. Louis, and in 1931 was promoted to general freight agent there. Mr. Collins became freight traffic manager in June, 1945.

R. A. Pendergrass, whose promotion to general passenger agent of the St. Louis Southwestern, with headquarters at Tyler, Tex., was reported in the *Railway Age* of July 1, was born on August 30, 1900, at Charleston, Ark., where he graduated from high school. He later attended Hendrix College and the University of Texas for two years, beginning his railroad career in April, 1920, with the Cotton Belt at Stuttgart, Ark. Following five

R. A. Pendergrass

years service in various positions in the local office at that point, he was appointed city passenger and ticket agent at Memphis, Tenn. In 1926 he was transferred to Louisville, Ky., as traveling passenger agent, becoming traveling freight and passenger agent at Nashville, Tenn., in 1928. Mr. Pendergrass was advanced to general agent at Nashville in 1930, and in 1941 was transferred in the same capacity to Birmingham, Ala., where he was located at the time of his latest promotion.

The Duluth, South Shore & Atlantic has announced the opening of a new office in Minneapolis, Minn. Appointed general agent at the new office is **Anthony H. Babich. Weslev E. Perron,** general agent at Duluth, Minn., has been appointed assistant general freight agent at that point. Mr. Perron's former post has been abolished.

Otto B. DuRand, assistant general freight agent at Chicago of the Grand Trunk Western (part of the Canadian National), will retire on August 1.

F. G. Butcher, commercial agent of the Chicago, Burlington & Quincy system at Tacoma, Wash., has been promoted to general agent at Spokane, Wash., succeeding the late **J. C. Boyer.**

Fred Heimlicher, Jr., general agent of the Illinois Central at Pittsburgh, Pa., has been promoted to general freight agent at Memphis, Tenn., effective August 1, succeeding the late **Sidney L. Springer.** Transferred to succeed Mr. Heimlicher is **James E. Gardner,** general agent at Washington, D. C., who in turn will be suc-

ceeded by **Walter P. Schindel,** foreign freight agent at St. Louis, Mo. **Eugene N. Crowson,** foreign freight agent at Chicago, will replace Mr. Schindel at St. Louis. **Peyton E. Scheppe,** district freight agent at Miami, Fla., will become general agent at Memphis, and will be succeeded by **Robert J. Hermann,** commercial agent at Jacksonville, Fla.

ENGINEERING & SIGNALING

David J. White, assistant designing engineer in the general office of the New York, Chicago & St. Louis, has been advanced to assistant engineer. In his new post Mr. White will be in charge of preparation of contracts and agreements.

G. W. Miller, assistant engineer maintenance of way of the Eastern region of the Canadian Pacific, has been appointed engineer maintenance of way of that region, with headquarters as before at Toronto, Ont., succeeding **A. O. Wolff,** who will retire on pension on July 31, because of ill health, after nearly 42 years of service.

C. T. Jackson, chief engineer of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, will retire on July 31. He will be succeeded by **W. G. Powrie,** assistant chief engineer, at Chicago. **H. B. Christianson,** principal assistant engineer at Chicago, will succeed Mr. Powrie. A photograph and biographical sketch of Mr. Powrie appeared in the *Railway Age* of January 7, in connection with his appointment as assistant chief engineer.

William Scott Hanley, chief engineer of the St. Louis Southwestern, at Tyler, Tex., has retired after more than 50 years of railroad service. He is succeeded by **W. H. Hudson, Jr.,** assistant chief engineer at that point.

Claude Johnston, assistant division engineer of the Louisville & Nashville at Mobile, Ala., has been advanced to division engineer at Birmingham, Ala., succeeding **James B. Clark,** appointed assistant to the general manager. **Charles T. Yarbrough,** assistant engineer, miscellaneous department, chief engineer's office, at Louisville, succeeds Mr. Johnston.

SPECIAL

Clarence H. Holtzworth, superintendent of employment in the personnel department of the Baltimore & Ohio, has been appointed manager personnel, at Baltimore, Md. Mr. Holtzworth was born in April, 1893, at Huntington, W. Va., and entered railroad service as a clerk in the freight office of the B.&O. there. After seven years in the freight department he transferred to the engineering department and in 1918 was appointed chief clerk at Baltimore. He served

Clarence H. Holtzworth

in the Army in World War I with a special training detachment at Richmond, Va. Returning to the B.&O. in 1919 as a levelman at Pittsburgh, Pa., he was connected with the engineering department there for the next 23 years. On April 16, 1942, Mr. Holtzworth was promoted to special engineer in the chief engineer's office at Baltimore and on May 1, 1943, became assistant to chief engineer. On May 1, 1945, he was appointed superintendent employment in the railroad's personnel department.

OBITUARY

Lee Lyles, assistant to president of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, died at St. Luke's hospital in that city on July 21 after an extended illness. Mr. Lyles was born on August 18, 1893, at Cameron, Tex., and attended high school and Toby's Business College at Waco, Tex. He entered the service of the Santa Fe in April, 1911, as a stenographer and clerk in the operating department

Lee Lyles

in Texas. Subsequently he served in various positions in the freight traffic and law departments until 1930, when he was transferred to the executive offices at New York. Five years later Mr. Lyles was appointed assistant to president at Chicago, and in June, 1936, was placed in charge of the road's newly organized public relations department, in which capacity he was serving at the time of his death.

J. C. Boyer, general agent of the Chicago, Burlington & Quincy system, at Spokane, Wash., died on July 1.

Sidney L. Springer, general freight agent of the Illinois Central at Memphis, Tenn., died recently in that city.

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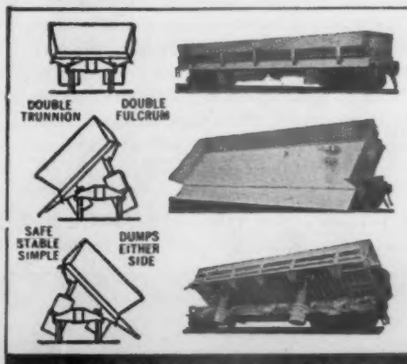

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